FLEET OPERATORS' REFERENCE ANNUAL

APRIL 1954

ccj COMMERCIAL CAR JOURNAL

THE MAGAZINE FOR TRUCK AND BUS FLEET OPERATORS

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COMMERCIAL CAR JOURNAL

1954 FLEET OPERATORS' REFE

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Charles Bartlett Rawson, Editor

TRUCK AND BUS SECTION 1 MAINTENANCE

Wear Limits 68
Engine Troubleshooting 73
Truck Service Data 78
Bus Service Data 101
Engine Service Data 104
Component Parts Table 108
Spark Plug Heat Range Chart 111
Engine Power Ratings 112
Passenger Car Service Data 114
Fan Belt Specifications 166
Addresses of Manufacturers 252

INDUSTRY SECTION 2 STATISTICS

Truck Registrations 116,117,118,11
Truck and Bus Production 11
Trucks in Use 118,11
Truck Factory Sales 120,12
Bus Factory Sales 12
Transit Buses Delivered 12
Intercity Passenger Miles Travelled 12
Urban Transit Riders 12
Trailer Registrations, Shipments 12
Intercity Truck Tonnage 12
U. S. Government Fleet Operating Facts 12

SPECIAL FEATURES

Canadian Truck Regs. 170
Allison "Torqmatic" Brake 174
IHC ½-Ton Pickup, 145-hp Engine. 176
Vehicle Nomenclature 178
Hall-Scott 200-hp Engine 190
Report on "Liqui-Moly" Use 226
Diesel Engine Troubleshooting ... 228
Great Dane Straight Truck Body.. 258
Fleet Training Course Calendar .. 303

Lincoln Automatic Trailer Luber .. 3
V-8 in Studebaker '54 Trucks 3
Light Weight Magnesium Body ... 3
GMC Heavy Duty "Hydra-Matic". 3

DEPARTMENTS

The Overload .....
At Your Service .....
Dates and Doings .....
New Product Descriptions .....

BPA NBP

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SECTION 3 SELECTION AND OPERATION

State Size and Weight Limits 124
Safety Equipment Required 127
Transmission Ratios 130
Transportation Engineering Formulas..... 132
Third Axle Specifications 134
Tire and Rim Data 140
Braking Data 142
Fleet Operators Film List..... 144
Maintenance Manuals Listing 146
Bus Specifications 148
Truck Specifications 151

Free Publications 54
Bulletin Board 56
Laugh It Off 58
CCJ News Reports
Washington Runaround 60
Detroit Dispatch 60
April Roundup 64
Fleet Notes 278
Factory Flashes 283
Fleetman's Library 288
Introducing 294

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The OVERLOAD

EDITORIAL COMMENT

Why Look the Roadeo Gift Horse in the Mouth?

EFFECTIVE accident reduction and good public relations are two business assets the truck industry needs and wants most. It can get both from State and National Truck Roadeos. Yet all-too-often the industry looks this gift horse in the mouth and turns thumbs down.

Last year only 18 states participated. Of these, eight conceived and executed their plans in a frantic last-minute rush between June 1 and Sept. 1 —too late to obtain maximum benefits. Another goodly handful had such meager support that future plans are in jeopardy.

It's a situation that needs careful thought and it needs it most at top management level! By and large association managers, safety directors, and drivers are whole-heartedly behind the project. But they know it takes hard work to stage a successful Roadeo and they know they can't do the job alone. The push must come from top-side in the form of full support and a genuine long range program.

What are the stakes and what does it take to do the job right?

First and foremost is accident reduction. If we forget everything else about a Roadeo, let's remember this one fact. *A driver may not even enter without an absolute accident-free record for the preceding 12 months.* There's the number one incentive for all drivers. Number two is the competition among all company drivers to be the one in each class who is selected to represent the company at the state Roadeo.

Can it be denied that a chance to win state and national acclaim is a better driver incentive than a lapel pin or even a cash award? Whether he wins the championship is of relatively minor importance! If he does it's all to the good; but the Roadeo has already done its job for the fleet in building morale and providing the incentive for accident reduction.

Second only to accident reduction is the Roadeo's public relations value. No other activity has focused so much favorable attention on the industry. This has come, in part, in the form of flesh and blood spectators wherever Roadeos have been held. Just plain people, if you please, who have often shown up with a chip on their shoulders and gone away with deep respect for the professionals.

And it has also come in the form of nationwide TV, radio and press publicity, culminating in the Feb. 13 issue of *The Saturday Evening Post.* Let's not overlook the fact that it was the National Roadeo that stemmed the tide of anti-truck shenanigans and made possible the *Post's* excellent article "Tournament of the Trucks." It told millions what only a few had known about the industry. And it didn't cost a penny.

Now very briefly what does it take from the viewpoint of the truck operator to make a Roadeo tick? The formula is simple:

1. Support or even help create your own state Roadeo as your part in an industry-wide move.
2. Enter a contestant now (name to be decided later) in each appropriate class.
3. Set up your own company elimination contest emphasizing the clean competitive angle.
4. Sponsor your winners at the state Roadeos (entry fees usually pay the freight on state champions to the national contest).
5. Back up the whole program with personal support from top management.
6. Don't be afraid of prima donnas (there have only been two or three in all Roadeo history).
7. Plan now for next year's contest and make it a year-long incentive for better driving.

Bart Rawson
Editor

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At Your Service

TIMELY NOTES ON MAINTENANCE AND OPERATION

by **MURRAY SIMKINS** Managing Editor

Shop Hints for February

SHOP Hints in February pulled a couple of comments from readers who took issue with certain points. Says R. J. Scholl, of IHC Branch office, Wilmington, in reference to the International Harvester axle puller, page 77: "It can pull axles on the KB-1 and the KB-2 since these models have a semi-floating axle. Model KB-3 has a full floating axle so that this type puller cannot be used." Thank you, Mr. Scholl.

The wrench for tightening compressor pulleys on White trucks, see page 77, February, showed a tool constructed by Joseph Tokasz and as such it will do the job. However, a manufacturer has indicated that this very tool is on the market and available for this work. It is one of the White approved tools, so check up on it if you need one.

Valve Seat Angle

NEWTON, Palmer and Reddy, in a recent SAE paper, make the following recommendations with regard to establishing the valve seat angle in certain engines.

From the standpoint of design, to prevent guttering from deposit formation a 45 deg seat angle will provide approximately 20% greater seating load than a 30 deg angle. However, the seat angle is oftentimes a compromise and to provide for equal valve lift area a 20% greater lift is required with a 45 deg angle than with a 30 deg angle. Where cylinder head distortion is present, a 30 deg face angle is a wise choice because for a given amount of eccentricity the leakage area of a 45 deg face is approximately 40% greater.

The use of an interference angle between valve face and the valve seat is good practice when face deposits are sufficiently troublesome. Interference angles will help to crush the deposits and prevent subsequent wire drawing and valve guttering. This expedient is not necessary in engines where the face deposit problem is minor. The interference angle is definitely not advisable with rotated valves which require full use of the maximum seat width to facilitate good valve face cooling and to prevent valve face grooving and seat wear. It should be pointed out that the most effective valve cooling is the path from the valve face to the cylinder block and any improvements made here have an immediate effect in reducing valve face temperatures.

Unit Fuel Injector Changes

THE Detroit Diesel Engine Division of General Motors has announced several changes contributing to longer life and increased operating efficiency in GM unit fuel injectors used in its line of Series 71 diesel engines. New engines leaving the factory are now equipped with the improved injectors and parts kits are available which make it possible to incorporate the same improvements in injectors now in use.

In the newly designed units the injector valve assembly has been moved from its former location within the spray tip to a higher position to lessen its exposure to high cylinder temperatures. The head of the new injector valve is now square in shape rather than round and maintains the former valve's crowned surface to insure maximum seat sealing.

Increased protection against compression pressure and heat is provided for the valve spring through a relocation of the check valve. This part is now located below rather than above the spring. A new spray tip was designed to accommodate the check valve.

The number of wearing parts in the follower assembly, which transmits motion from the rocker arm to the injector plunger, has been reduced. Also, the follower spring is now heavier and stronger. Smoother and more complete fuel combustion while the engine is operating at part load is attained by a new plunger and bushing assembly. This is shorter and a new "helix" on the plunger varies timing according to rack position.

There is little change in the external appearance of the new injectors but they are easily identified. They are known as "High Valve" injectors and are marked either "HV6," "HV7" or "HV8." These symbols indicate new units of 60, 70 or 80 cubic millimeter capacity, respectively.

Industry Standard for Muffler Noise

ADOPTION of an industry standard for muffler design has been recommended to all truck makers, according to the Automobile Manufacturers Association. The standard, which would apply to both original equipment and subsequent replacement units, would establish a maximum permissible noise level and an agreed method of measuring exhaust noise. The action

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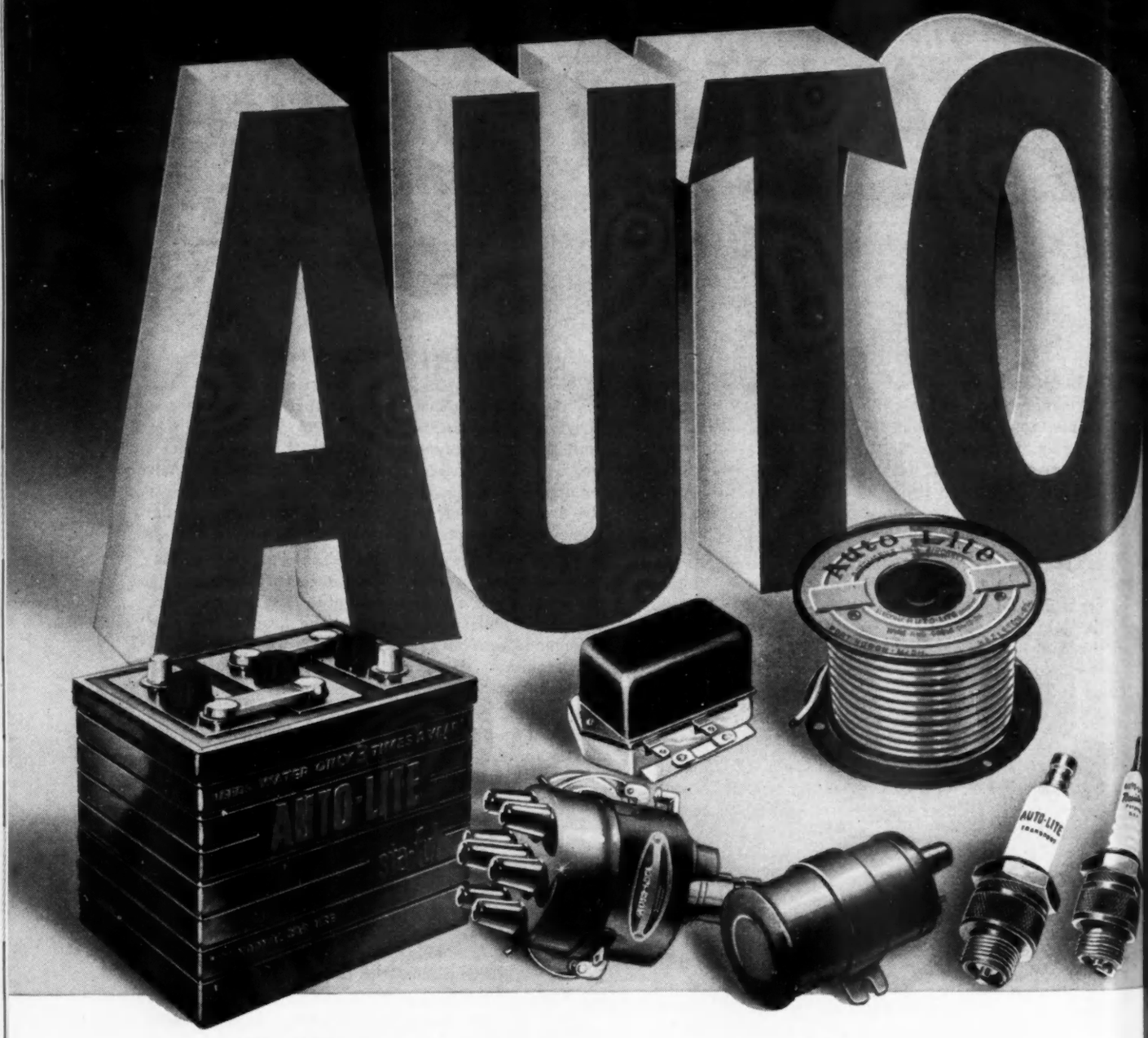
1 out of every 3 cars in America's eq



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CCJ At Your Service

Continued from Page 9

originated with the AMA's Motor Truck Committee, acting on the advice of its Truck Noise Subcommittee.

Recommended measuring procedure, using the Beranek-Armour Equivalent Tone Method, was developed by the Armour Research Foundation last year at Illinois Institute of Technology, under terms of a grant from the American Trucking Associations.

A major advantage of the method is its use of commercially available instruments. These include a high-quality magnetic tape recorder and microphone, a set of octave filters, and means for acoustical calibration.

The proposed design standard calls for a maximum noise level of 125 sones, with the sones measured in each of eight bands covering the frequency range from 37 to 9,600 cycles per second, then added to produce the total of 125 or less.

The AMA committee points out that truck manufacturers have made significant advances in muffler design in recent years, but says that adoption now of a standard method of measuring results would help stimulate further progress. It is recognized that other promising methods of noise measurement may, when thoroughly tested, provide an even better standard. Such possibilities will not be overlooked.

Briefly, this evaluation consists of recording the noise on a high-quality magnetic tape recorder as the truck passes by under load. The noise thus recorded is played back through a set of octave bandpass filters. The sound level reading of each band is recorded and plotted on the Armour grid. From this grid, the loudness in sones for each of the filter settings is read off and the individual readings summed up for a single loudness reading for the truck.

Diesel Exhaust Valve Problems

A ROUND-TABLE discussion of "Diesel Exhaust Valve Problems Associated with Fuels and Lubricants" was held at the 1953 SAE Summer Meeting. Excerpts from the Secretary's report follow:

"In general, the higher the ash content of the lubricating oil, the greater is the likelihood of excessive valve deposits and valve burning. However, there was little consistency in the reported experiences. One panel member stated that his company had a record of thousands of hours successful operation with high ash lubricating oils although five deposit-caused valve burning failures had been experienced under laboratory conditions. Another told of an instance wherein light face deposits had actually appeared to improve valve seating. Another said that his experience showed no real correlation between the amount of valve deposits and valve burning. It appeared that the use of high ash lubricating oils did not in itself lead to valve

(TURN TO PAGE 14, PLEASE)

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This new Lee tire was specially designed to fill a definite need never before satisfied by any truck tire on the market. It's an extra-tread tire with excellent forward and backward traction. It will deliver up to 45% more mileage than a 100 level highway tire. And it can be matched up on duals with any standard highway tire.

In most tires, you have to sacrifice either mileage or traction, but the Lee Super DeLuxe Cleat-Rib scores high on both counts. There are good reasons for this. One is the Lee Cleat-Rib tread, which is nearly half again thicker than on 100 level highway tires. Its deep cut design between cleats and its double radius contour keep it cool running. There is no risk of tread cracking. Center groove gives added protection against side slippage.

Other features that make this tire outstanding are the special-formula rubber for maximum chip and tear resistance; the exclusive Lee Flexlok process that makes separation of the high-tenacity cords practically impossible; the use of Lubri-Cushions between the plies for greater carcass strength and less internal friction; and the sturdy basic construction you find in all Lee tires.

Visit your nearby Lee Truck Tire dealer and see the new Lee Cleat-Rib. Or send the coupon for the illustrated folder telling the full story.

INTERCHANGEABLE. The Lee Cleat-Rib has the same overall diameter as 100 level highway tires. Can be interchanged or paired up with regular tread tires on dual wheel drives. The addition of chains on the regular tires provides supertraction if needed.

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Continued from Page 12

burning failures. Other factors, such as severity of operation, engine design and operating period between overhauls seemed to be highly important.

"Possible means of minimizing the effects of valve deposit problems were proposed as follows:

"(a) Improved valve materials. Higher nickel contents appeared to improve valve resistance to guttering and burning. Corrosion of valve materials is not often involved, but when such corrosion does occur, the resulting corrosion products sometimes help to hold deposits. Ordinarily, valve materials do not in themselves affect deposits. When a change in material does affect deposit formation, it is generally a result of changed valve temperature due to different design or heat transmission factors.

"(b) Valve rotators. Users disagreed about their effectiveness. In some instances they appeared to reduce the build-up of seat deposits and in other cases, their value was questionable. One panel member reported Brinelling-damage to rotator components that indicated a probably short effective life.

"(c) Reduced lubricating oil flow to valve stems. No more lubricating oil should be supplied to valve stems than is required for their lubrication. Any excess oil simply becomes available for the formation of deposits.

"(d) Proper selection of lubricating oils. High ash lubricating oils were developed to meet a definite engine need. As such, their use is indicated in certain engines operating under severe conditions. However, they should be used only when they are definitely required by the engine design, operating conditions, or use of a lower-grade fuel oil.

"(e) Valve design. Design factors lowering valve temperature and minimizing the distortion of valves and valve seats are helpful in reducing deposits. Use of valve face and seat interference angles are sometimes helpful in cleaning deposits from valve seats and preventing their excessive build-up."—From a paper presented by Newton, Palmer and Reddy at the SAE National Diesel Engine Meeting.

Lock Ring Installation

ACCORDING to A. J. Brezina, of Thompson Products, Inc., there is considerable field difficulty in the field due to failure to lock rings within the pistons. This is usually due, he thinks, to improper lock ring installation.

Care should be exercised in the installation of lock rings as many cases of lock ring failures are directly due to errors of installation. This applies particularly to lock rings of the two-tang or double-ear type. If the tangs, or ears, in this type of lock ring are compressed

(TURN TO PAGE 18, PLEASE)

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A voltage regulator set too high could burn out the battery and shorten the life of every replacement item in the electrical system. A voltage regulator set too low can cause frequent battery discharges, recharges and premature failures from sulphation.

By keeping your batteries "in line" with this Goodyear Fleet Battery Maintenance Plan, you get longer battery life, better electrical system service, and less road delay. And you save even more when you use this plan with Goodyear's Heavy-Duty Truck and Bus or Diesel-type batteries. You'll find the whole story on this plan in a new booklet called the Goodyear Fleet Maintenance Manual. Clip the coupon below and send for it today. It's free, of course.

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Continued from Page 14

together, the lock ring takes a permanent set and loses its tension. The correct method of installing double-eared lock rings is to grip *only one* tang, or ear, with needle nose pliers, then insert one end of the lock ring into the groove. The lock ring then should be rolled or pushed into position. This method of installation will prevent permanent setting of the lock rings and avoid the danger of costly failures.

Bus Battery Rental Plan

A BATTERY rental plan for bus operators has been announced by Bus Battery Division, Bowers Battery & Spark Plug Co. The rental service has already been put into operation by a number of fleets. Bowers rents the batteries on a monthly basis with the average number of months' service the operator has been receiving on any makes of batteries determining the monthly rental rate. Important to the operator is that he does not have to replace his present batteries with Bowers batteries in order to get the plan into operation. In addition the operator can get new batteries or increase his fleet at any time without cash outlay for battery purchases. Substantial savings in yearly battery costs are also effected by the plan.

Safety Tip for Welders

CUTTING oily steel plates can be hazardous because flames from the cutting torch often heat the oil deposits to the ignition temperature quickly, causing fires.

One way to avoid such fires, say engineers of the Ansul Chemical Co., is to spread a thin layer of dry chemical over the area to be cut. By doing this, the flames are extinguished before they can get started, and production remains uninterrupted.

Crankshaft Rebuilding Service

TO ROUND out their program of furnishing complete rebuilding service on all engine parts—both gasoline and diesel—Cleveland Hone & Mfg. Co., 8816 Harkness Rd., Cleveland 6, Ohio, announce that they are now equipped to rebuild crankshafts up to 96 in. in length.

New equipment which they have had to install include grinding machinery for large shafts as well as chrome surfacing equipment of the same length. Also new electro heat treating furnace—a most important feature of the hard chrome surfacing process. Much of the machinery used in their rebuilding work is of their own design.

DATES *and* DOINGS

APRIL

7-10—Independent Movers and Warehousemens Assn., Chase Hotel, St. Louis, Mo.
8-11—Midwest Automotive Trade Show, Kiel Auditorium, St. Louis, Mo.
11-13—Customer Relations Council, American Trucking Assns., Spring Meeting, Palmer House, Chicago, Ill.
20-21—Middlewest Shipper-Motor Carrier Conference, General Meeting, President Hotel, Kansas City, Mo.
20-23—American Gas Assn. and Edison Electric Institute Motor Vehicle Committees, Spring Conference, Mt. Royal Hotel, Montreal, Canada.
22—Maine Truck Owners Assn., Annual Meeting, Hotel Lafayette, Portland, Me.
27-30—American Transit Assn., Region I and II Conference, Hotel New Yorker, New York, N. Y.
27-30—Tri-State Regional Automotive Show, Pittsburgh, Pa.
29-30—Alabama Trucking Assn., Annual Meeting, Hotel Admiral Semmes, Mobile.
29-May 1—Colorado Motor Carriers Assn., Annual Meeting, Cosmopolitan Hotel, Denver, Col.

MAY

4-6—National Highway Users Conference, Highway Transportation Congress, Mayflower Hotel, Washington, D. C.
4-7—American Welding Society, Spring Technical Meeting, Hotel Statler, Buffalo, N. Y.
6-8—Tank Truck Carriers Conference, American Trucking Assns., Annual Convention, Netherland-Plaza Hotel, Cincinnati, Ohio.
10-14—Common Carrier Conference, American Trucking Assns., Board of Governors Meeting, Shoreham Hotel, Washington, D. C.
11-14—Council of Safety Supervisors and Equipment and Maintenance Conference, American Trucking Assns., Spring Meetings, Sinton Hotel, Cincinnati, Ohio.
16-18—Maryland Motor Truck Assn., Annual Convention, Lord Baltimore Hotel, Baltimore, Md.
17-20—National Committee on Accounting, American Trucking Assns., Nicollet Hotel, Minneapolis, Minn.
18-20—American Transit Assn., Region V Conference, Hotel Leamington, Minneapolis, Minn.
20—Rhode Island Truck Owners Assn., Annual Meeting, Narragansett Hotel, Providence, R. I.
20-23—Georgia Motor Trucking Assn., Annual Meeting, Bon Air Hotel, Augusta, Ga.
20-23—New England Regional Automotive Show, Mechanics Bldg., Boston, Mass.
23-26—Washington Motor Truck Assn., Annual Convention, Harrison Hot Springs, British Columbia.
24-26—America Transit Assn., Region VII Conference, Washington Hotel, Seattle, Wash.
24-26—Automotive Engine Rebuilders Assn., Annual Convention, Statler Hotel, Buffalo, N. Y.
24-27—Terminal Operations Council, American Trucking Assn., Annual Meeting, Sheraton Hotel, St. Louis, Mo.

JUNE

6-11—Society of Automotive Engineers, Summer Meeting. The Ambassador and Ritz-Carlton Hotels, Atlantic City, N. J.
7—Assn. of Transit Equipment Men, Middle Atlantic States, Du Pont Hotel, Wilmington, Del.
10-12—Texas Motor Transportation Assn., Annual Convention, Adolphus Hotel, Dallas, Texas.
18-19—Pennsylvania Motor Truck Assn., Annual Meeting, Roosevelt Hotel, Pittsburgh, Pa.
24-27—National Truck, Trailer and Equipment Show, Pan-Pacific Auditorium, Los Angeles, Cal.

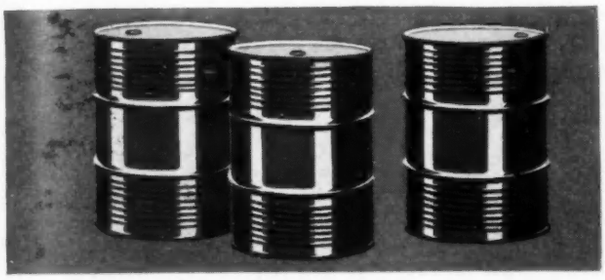
SEPTEMBER

8-11—National Truck Roadeo, American Trucking Assns., International Amphitheater, Chicago, Ill.
27-30—American Transit Assn., Annual Meeting, William Penn Hotel, Pittsburgh, Pa.

OCTOBER

25-29—American Trucking Assns., Annual Convention, Waldorf-Astoria Hotel, New York, N. Y.

Use Socony-Vacuum's Quality Products, Engineering Service and Simplified P. M. System!



FAMOUS QUALITY PRODUCTS—

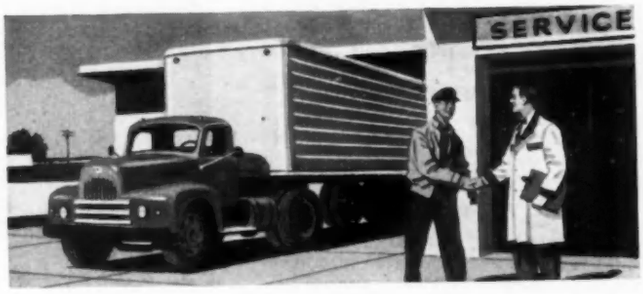
Delvac Oils — for all gasoline and automotive Diesel engines.

Mobilube GX — multi-purpose gear lubricant for all enclosed gears — manually operated transmissions, transfer cases, final drives.

Mobilgrease — types and grades for correct lubrication of all chassis parts, engine accessories.

LUBRICATION ENGINEERING SERVICE—

We will analyze your fleet conditions, advise on lubrication schedules and inspection periods. We also provide the services of expert lubrication engineers when necessary, give you progress reports of benefits achieved. Our research laboratories — our 88 years' experience — are all at your service!



SIMPLIFIED P.M. SYSTEM—

Just three things to work with — record folder, work sheet, control blackboard. We supply folders, work sheets — show you how to use them — help you set up entire system. It's simple, foolproof, profitable — helps reduce wear, repairs, breakdowns . . . cut maintenance costs to the bone!

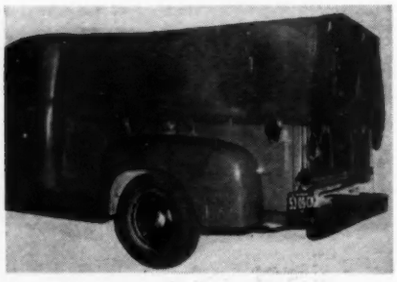
SOCONY-VACUUM

FOR FLEET OPERATORS

MAGNOLIA PETROLEUM COMPANY, GENERAL PETROLEUM CORPORATION

New PRODUCTS

The latest developments in parts, accessories, tools and equipment for the fleet field, described in brief for your convenien

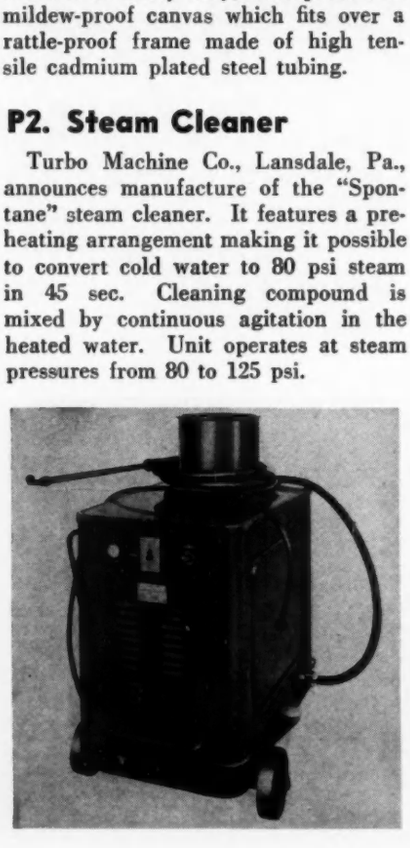


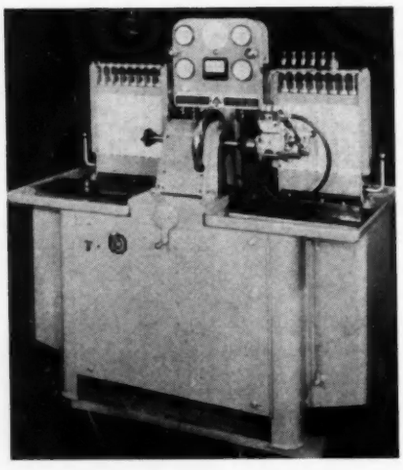
P1. Small Truck Cover

D & M Truck Top Co., Detroit, has placed on the market a covered wagon top for pick-up trucks. The truck top is made of heavy duty, waterproof and mildew-proof canvas which fits over a rattle-proof frame made of high tensile cadmium plated steel tubing.

P2. Steam Cleaner

Turbo Machine Co., Lansdale, Pa., announces manufacture of the "Spontane" steam cleaner. It features a preheating arrangement making it possible to convert cold water to 80 psi steam in 45 sec. Cleaning compound is mixed by continuous agitation in the heated water. Unit operates at steam pressures from 80 to 125 psi.



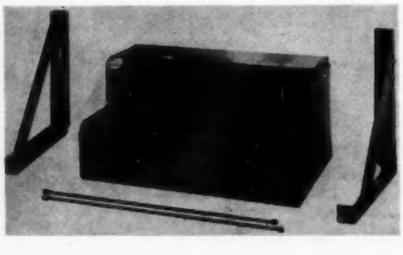


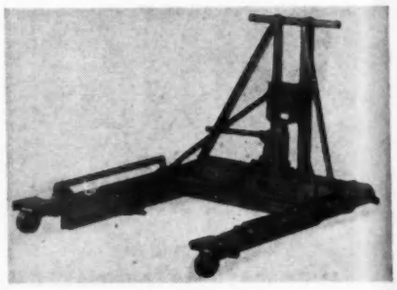
P3. Diesel Pump Stand

Bacharach Industrial Instrument Co., Pittsburgh, Pa., has added to its line a "universal" test stand for calibrating all popular makes of multi-plunger and distributor types of fuel injection pumps, including American Bosch APE and PSB, International Harvester, and Cummins pumps.

P4. Safety Tank

Designed for under-cab mounting, Prior Products, Inc., Dallas, Texas, has announced a new "L-Step" fuel tank. It meets ICC requirements and is UL approved up to 75 gal capacity per tank. No drilling or welding of tank is necessary as mounting brackets are separate.



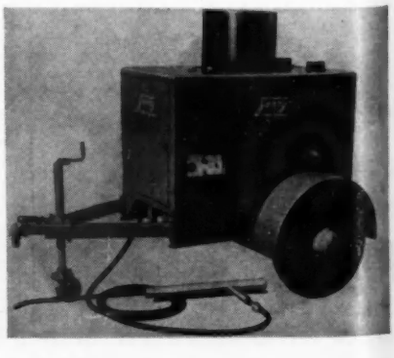


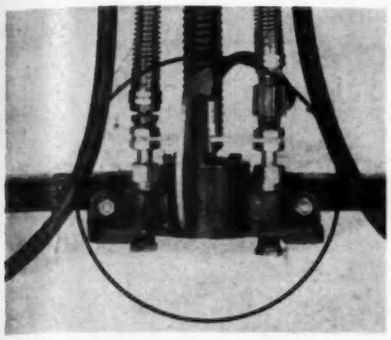
P5. Truck Wheel Dolly

E-Z Lift Mfg. Co., a division of Brummeler Steel Products Corp., Grand Rapids, Mich., announces its new "E-Z Lift" truck dual wheel dolly, enabling one man to easily remove and replace dual wheels. Features include; (1) the "Booster" which shakes or vibrates the duals to loosen obstinate outside bearings and assists in starting the brake drum on the brake shoe when the duals are remounted, (2) the "Tire Evener" which automatically adjusts to different sizes.

P6. Steam Cleaner

New Series "3000" Hypressure Jenny steam cleaners announced by Homestead Valve Mfg. Co., Coraopolis, Pa., feature single heating coil with oil-fired burner and sufficient volume to supply up to four cleaning guns.





P7. Break-Away Valve

A new automatic shut-off valve (circled) for tractor trailer power braking systems is now available from Franklin Industries, Acton, Ind. The new valve, Absco No. 500, operates at any range of air pressure. Operation is completely automatic without action by the driver.

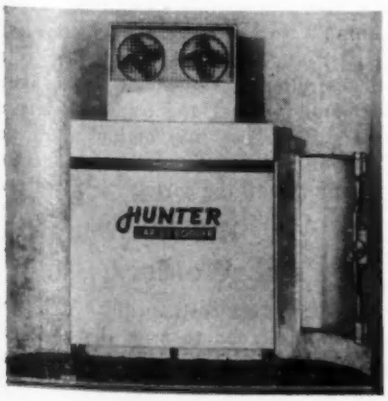
P8. Trailer Connector

Berg Mfg. and Sales Co., Chicago, now has a new, round "Shur-Lock"

trailer connector in 6 and 4-way models. Features include automatic cover closing, and automatic locking.

P9. Cargo Cooler

Four distinct new features and design improvements to increase the refrigerating effectiveness of all three models of the "Hunter" cargo cooler have been announced by Hunter Mfg. Co., Cleveland, Ohio.. Fans, now mounted directly above the dry ice bunker to increase the volume-per-minute flow of cold air, are also more easily accessible for servicing.

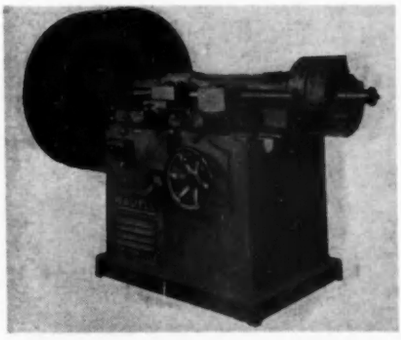


P10. Reefer Insulation

A new low-temperature insulation material, "Isoflex K-20," has been announced by Isoflex Corp., Redwood City, Cal. The new material is a series of corrugated aluminum foil barriers interspaced with resilient spun glass fibre. It is manufactured in panels ranging up to 6 in. in thickness. Aluminum foils are said to minimize heat transfer by radiation, form an effective vapor barrier, and serve as drainage channels for condensed moisture.

P11. Brake Drum Lathe

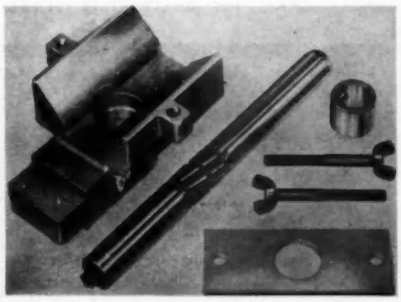
The new Wadell "Transfermatic" double spindle brake drum lathe, with

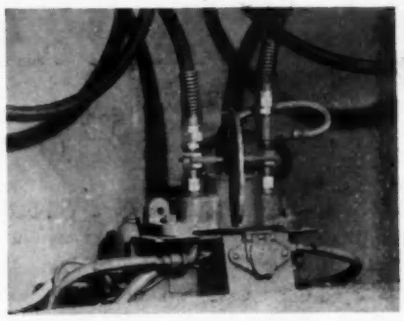


its boring bar on one end and turning bar on the other end, features boring of drums with tires mounted, and simultaneous turning of a matching lining. The Wadell Equipment Co., Garwood, N. J., designed this lathe.

P12. Bushing Reamer

A new series of piston bushing reamer sets for GM diesel engines, designed to remove excess stock from service bushings to factory specifications, is announced by Kent-Moore Organization, Inc., Detroit. A special set has been developed for each of three GM diesel engine applications.



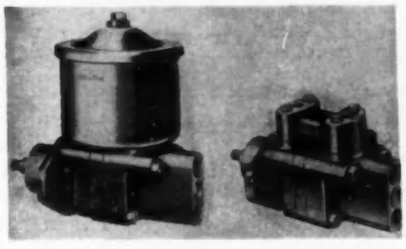


P13. Break-Away Valve

Warehouse Distributing Co., Milwaukee, Wis., announces the release for distribution of its new No. 500 automatic brake safety shut-off valve. The new No. 500 valve complies with ICC regulations. The new valve automatically closes the air off on the tractor each time the trailer hoses are uncoupled or broken. No special mounting or extra fittings are required.

P14. Power Steering Pumps

Vickers Inc., Detroit, has announced production of two new pump series for hydraulic steering systems. Series No. VT16 consists of a vane type hydraulic pump, flow control and overload relief valves and integral oil reservoir. Series No. VT17 comprises identical pump



and valve units without the reservoir and is designed for installations where a separate tank is preferred.

P15. Spark Plug Cleaner

A new cleaning and testing service unit is being marketed by Champion Spark Plug Co., Toledo, Ohio. Known as the Model No. 700 Series Service Unit, it is offered in both floor and

(TURN TO NEXT PAGE, PLEASE)

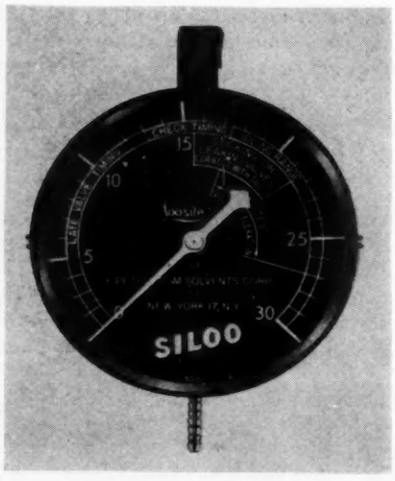
New Product Descriptions

Continued from Page 51

bench models. New features include: a redesigned cabinet with a cut-back in the front panel to provide a handy work shelf, sturdier channel-type tapered legs in floor models, recessed spark viewer, and a larger easier-to-read "Comparator" gage.

P16. Vacuum Gauge

The new "Siloo" vacuum gage is now available for Siloo users in conjunction with the purchase of two cases of



Siloo crankcase additive, Petroleum Solvents Corp., New York City, has just announced. The vacuum gage has a 4½-in. dial, lithographed in six colors for easy legibility. It is a precision instrument, accurately-calibrated to reveal quickly sticking valves, carburetor adjustments, leaking intake manifolds, etc.

P17. Reefer System

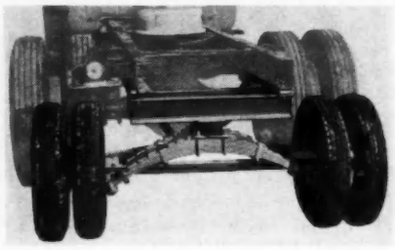
Introduction of a hermetically sealed truck refrigeration system has been announced by Coldmobile Div., Union Asbestos & Rubber Co., Blue Island, Ill. Known as the TR-15, the system consists of two separate sections. The refrigeration unit package is designed to mount through an opening 25½ in. wide by 23¾ in. high in the upper front wall of a trailer with the evaporator section inside and the condenser section outside. Other section is the power unit package designed to mount underneath the trailer. This houses a direct-connected engine-generator unit, batteries, and plug-in cord. A heavy-duty, four-conductor cord makes the electrical connection. Defrosting of the refrigeration system is automatic.

P18. Welding Flux

A new all-purpose welding and brazing flux has just been announced by Andco, Inc., Orchard Park, New York. It is said to provide one flux for all types of gas welding and brazing, well through lead, beryllium, aluminum, bronze, galvanize, copper, rust, grease, paint, tar and dirt. It also is said to braze and weld cast iron, chrome metals, stainless, monel, aluminum, bronze, silver solder and many others. It cleans as it is used during welding and brazing operations. Andco Uni-Flux produces an inert atmosphere around the weld area that keeps oxygen away from such foreign substances as dirt, grease, rust, paint and metal finishes by prohibiting the burning of these substances.

P19. Trailing Axle

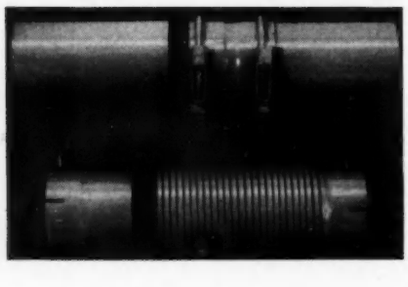
Fox Body Co., Janesville, Wis., announces the marketing of a new trailing axle. Among the features claimed for the axle are: (1) the desirable-trail-

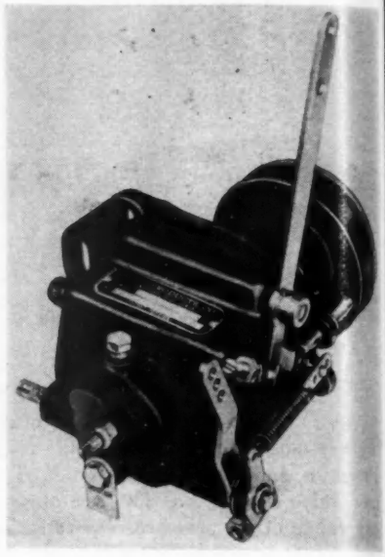


ing characteristics necessary for long tire wear and ease of handling, and (2) its ability to increase truck payloads by as much as 8000 lb. The new axle has a simplified mounting bracket.

P20. Exhaust Coupling

Two new exhaust line couplers, announced by Western Piping and Engineering Co., San Francisco, Cal., make easier installation of exhaust elbows, straight and flexible tubing, and exhaust stacks, for heavy duty trucks.





P21. Pulley-Type Governor

The new, Model No. C-15, universal governor is applicable to practically all engines, according to Hoof Products Co., Chicago, Ill. The extended actuating splined lever shaft makes it possible to shift the lever from one side to the other, or up and down, in a few moments time, for left or right hand mounting and to line up properly with the carburetor lever. The cover may be rotated in any one of three positions, by simply removing the four cover screws, to conform to the best possible position in relation to drive pulley and carburetor. All of these new universal governors are furnished with variable speed levers.

P22. Fuel Pump

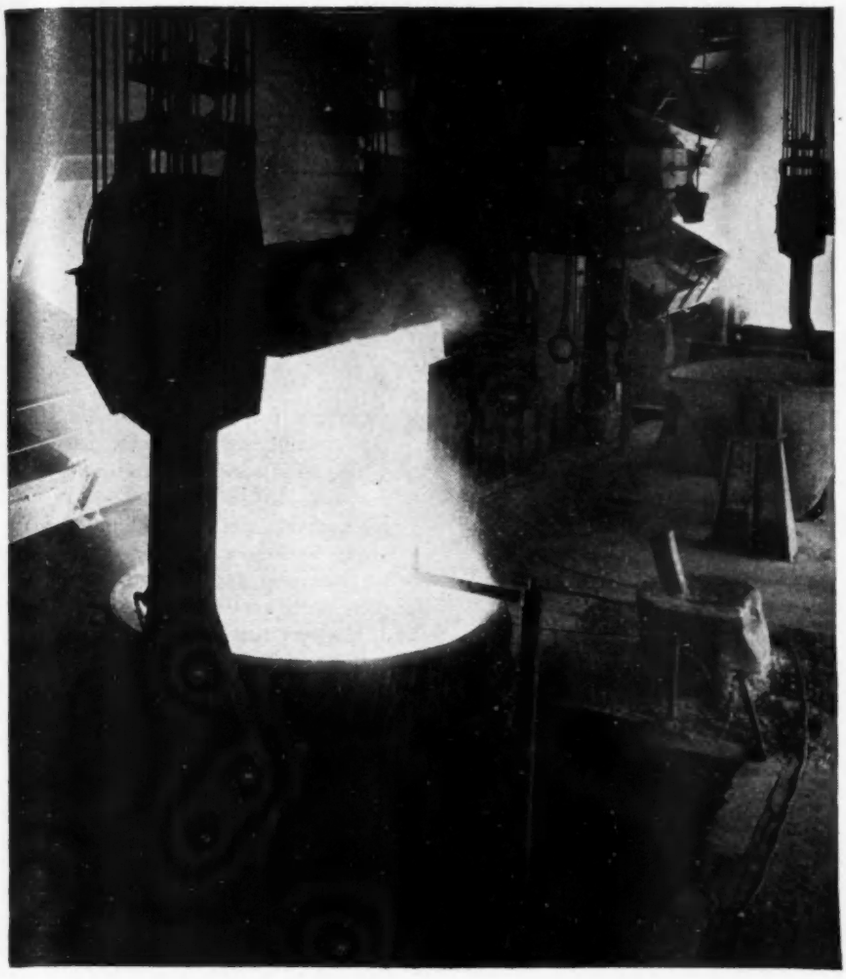
A new electric fuel pump for trucks, busses and all gasoline engines has been announced by the Instrument Division, Stewart-Warner Corp., Chicago. It is made in two models—six and twelve volt—and may be used on either negative or positive ground systems. At full capacity, which is in excess of 35 gal per hr without restriction in the line, the pump operates at only 250 strokes per minute. The manufacturer claims that because of the slow operating speed, the "Super Pump" works less, runs cooler, lasts longer and costs less per mile. Rate of operation is dependent upon engine demand for fuel and not upon engine speed. It goes into action when the ignition switch is turned on and keeps pumping until the carburetor float bowl is full of fuel.

P23. Arc Welder

A new, low-cost, utility A.C. arc welder, designed to meet the needs of shops that do not require "production-

(TURN TO PAGE 238, PLEASE)

To find steel good enough, we make our own



(Another reason why Timken® bearings are first choice with truck manufacturers)

WE had to go into the steel business to get steel good enough for Timken® bearings. (Something no other bearing manufacturer has done.) The result: Timken bearings are made out of the world's finest bearing steel. And we're the only bearing manufacturer that can control quality at every step in production—from melt shop through final bearing inspection.

Only with Timken bearings do you get all the advantages of 1) advanced design, 2) precision manufacture, 3) rigid quality control, 4) special analysis Timken steels.

That's why truck manufacturers make Timken bearings their first choice. And that's why it'll pay you to specify "Timken" for every replacement bearing. To make your bearing maintenance problems easier, send now for your free copy of "Timken Tapered Roller Bearings — Their Care and Maintenance". Write Dept. JCC-4. The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

SINCE THEY'RE BEST WHEN THE TRUCK IS NEW, THEY'RE BEST FOR REPLACEMENT, TOO!

TIMKEN

TRADE-MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS

NOT JUST A BALL NOT JUST A ROLLER THE TIMKEN TAPERED ROLLER BEARING TAKES RADIAL AND THRUST LOADS OR ANY COMBINATION

Free PUBLICATIONS

FOR YOUR CONVENIENCE USE THE POSTCARD ON PAGE 50

L1. Driver Leaflets

Here are an outstanding series of 10 leaflets addressed to drivers containing instruction on how to attain accident-free driving. Each of the 4-page, 4 by 6-in. folders is a different color, and each describes a different factor in safe commercial vehicle driving.

The series, entitled "Avoiding Accidents," starts with "5 Steps for Professional Drivers at Intersections," says "Most accidents happen at intersections" and actually reviews 10 tips to avoid intersectional accidents. No. 2 in the series covers backing, tells how to stay out of trouble in reverse.

Third leaflet covers the dangers of tailgaiting from a safety and courtesy viewpoint. No. 4 lists 10 conditions which make legal speed an unsafe speed, emphasizes driving too fast for existing road conditions.

Passing and center-line crossing accidents are the subject of the fifth folder. No. 6 in the series instructs the driver in vehicle mechanical inspection.

Seventh leaflet is a nine-point review of what to do should the driver be involved in an accident, includes tips on filling out the accident report. The importance of courtesy to safe operation is the subject of No. 8. Nine ways to spread driving courtesy are given.

Night driving hazards and proper physical care for after-dark driving are covered in leaflet No. 9. Last in the series, No. 10, is a quick review of what the driver should do automatically when faced with certain emergency conditions — tire blowout, brake failure, skidding, etc.

Fleet operators can obtain a set of these driver safety leaflets, together with information on quantity prices, without charge by circling L1 on the postcard on page 50.

L2. Welder Manual

This handy 45-page, pocket-size, "how-to-do-it" manual explains how a shop can build its own gasoline engine-driven, portable welding rig. Starting with a basic plan, the publication suggests several variations to suit almost any purpose.

First step in the book is construction of the frame with several possible plans being offered. Various ways of transmitting the power from the gasoline engine to the generator of the welding unit are described in detail.

Sections are also included on installing the radiator, placing the fuel tank and constructing a canopy top. Each step is carefully considered from a viewpoint of producing a welding unit that will be trouble-free in operation.

Suggestions are given on how to control engine speed and on the value of an idling device to save fuel consumption as well as wear and tear. Various types of portable units are shown and suggested, including self-powered units, truck chassis-mounted welders, and trailing units. Most of these can be adapted for stationery mounting.

So you can have a copy handy when the time comes to build a time-saving, gasoline engine-drive welding unit, circle L2 on the postcard on page 50.

L3. Clutch Chart

This full-color, full-size wall chart will give you an easy-to-follow maintenance guide for Timken-Detroit hypoid-helical, two-speed, double-reduction drive units.

It has three sections: (1) a complete cross-section view of the unit, (2) a gear tooth trouble shooting guide, and (3) a series of four charts giving diameter, threads per inch and torque for adjusting the cap screws, stud nuts, pinion shaft nuts and differential bolts.

The cross section diagram of the unit measures 15 by 11 in., shows the unit in complete detail. Around this diagram, in large, easy-to-read type, are maintenance and adjustment instructions with arrows leading to the part of the unit they apply to.

Circle L3 on the postcard on page 50 for your copy of this maintenance wall chart.

L4. Tire Booklet

This booklet is for the files of fleet supervisors interested in cutting truck and bus tire costs. Section-by-section it presents a complete outline of proper tire care so as to obtain greater mileage.

Included is a special section on driving habits desirable to obtain longer tire road life. Care of inner tubes and instructions for tube inflation and mounting are given.

Proper matching and spacing of dual tires is considered, including data on troubles that arise as a result of incorrectly spaced duals. A check list of causes of uneven tire wear tells what to look for to correct the problem.

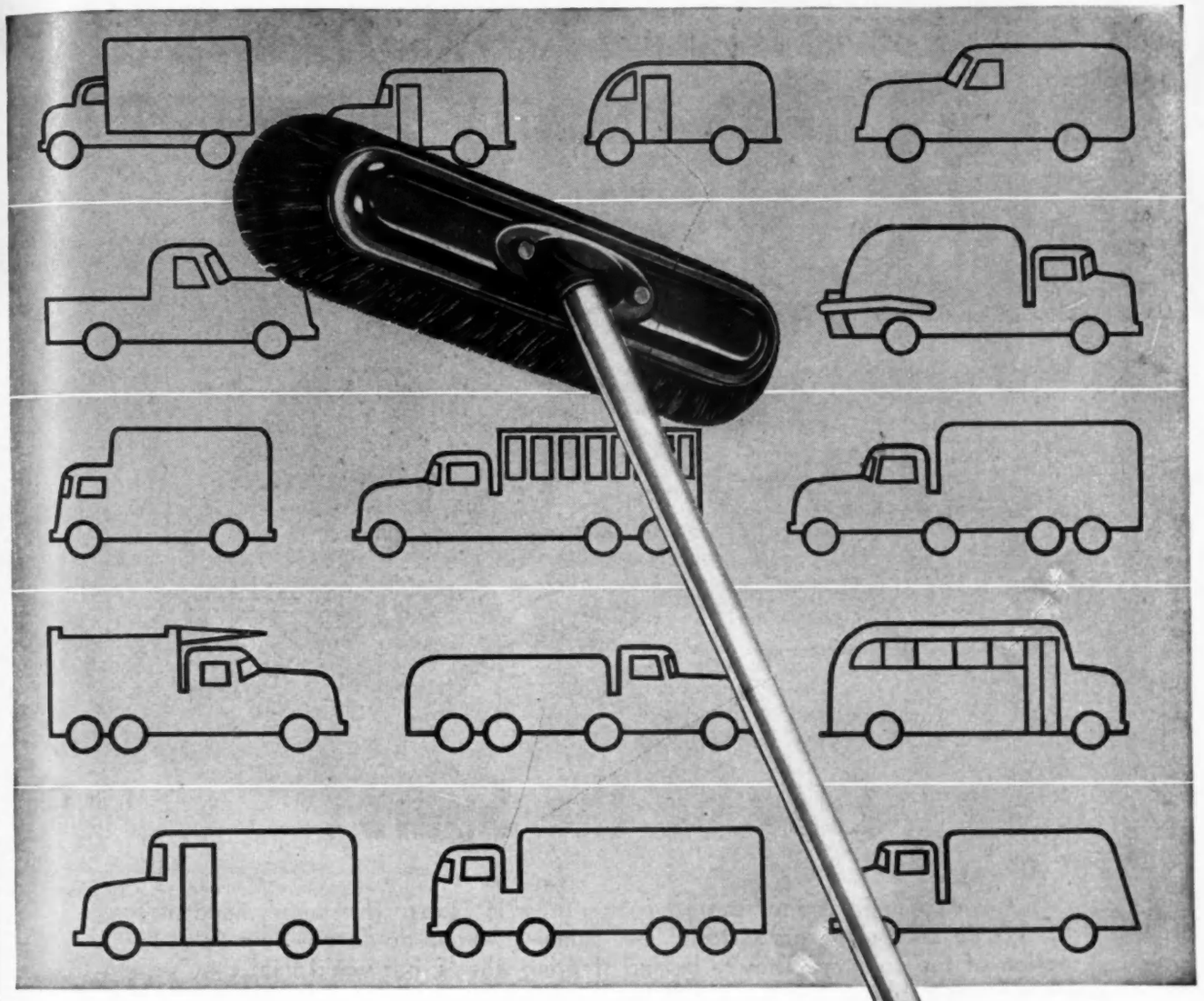
To obtain a copy of this tire-saving booklet, circle L4 on the postcard on page 50.

L5. Painting Data

This 32-page booklet presents in a series of pictures and captions a complete outline on how to make the most of spray painting. While designed as a review and refresher manual for the film "Making the Most of the Spray Painting Method" (see film list, this issue, page 144), it is sufficiently comprehensive to be of value by itself.

To get a copy of this booklet, circle L5 on the postcard on page 50.

For information on additional literature of interest to fleet operators, see page 288



WASH MORE TRUCKS PER HOUR. MORE TRUCKS PER BRUSH

Every part of the Speed Wash is designed for easy handling, top performance and long service. Speed Wash bristles are soft and resilient (50% Nylon, 50% Select Horsehair) to prevent tangling and matting. The tufts are fastened with rust-proof wire; they cannot come out or come loose. The block is water-proof mahogany plywood. The steel back is water-tight and surrounded with a mar-proof rubber bumper. The steel handle is light-weight and zinc-plated inside and out.

These and other features put Speed Wash in a class by itself, the quality fountain brush of the trucking industry. Thousands of fleets prefer Speed Wash. We know you will, too. In fact, we guarantee it.

ORDER ON THIS GUARANTEE

SPEED WASH brushes are guaranteed to be exactly as represented. Your money will be refunded in full including shipping costs, if they do not give complete satisfaction and are returned within 10 days.

No. 250 ROUND

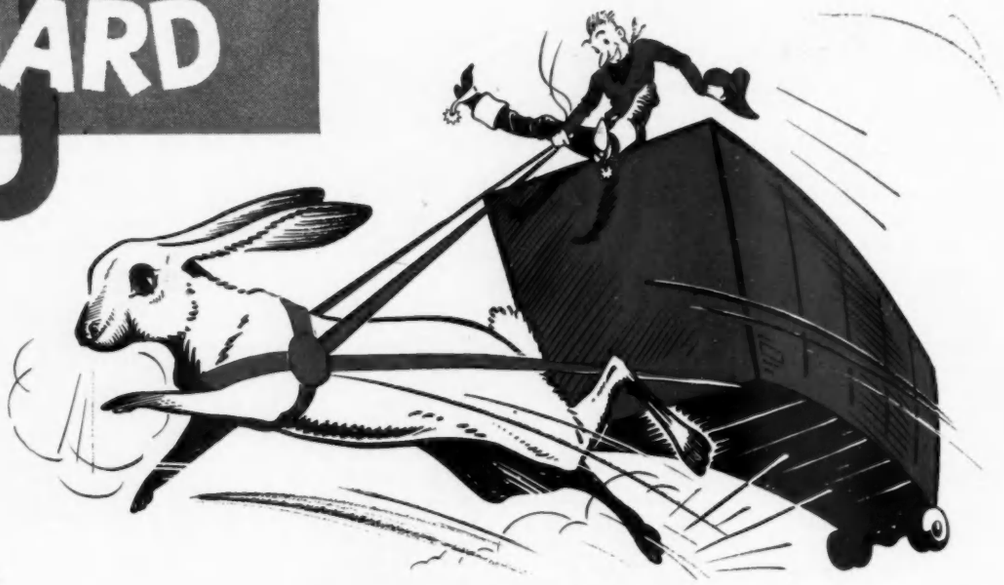
EITHER STYLE
Complete with 5' handle $12.45

SPEED WASH

MILWAUKEE DUSTLESS BRUSH CO. (MD) **530 N. 22nd ST., MILWAUKEE 3, WIS.**

CCJ BULLETIN BOARD

DRIVERS • MECHANICS • SAFETY MEN *Please Note!*



Easy on the Spurs!

Some people think that cowboys only grow in Texas. That hain't necessarily so. We've seen some cargo-totin', tire-spinnin', whoop-de-do cowboys in every section of the country. They're behind steering wheels, but you'd think they were driving jack rabbits.

Ever notice what happens to their trucks when they dig the spurs into these rigs to start them? The damage is deplorable, and the replacement cost is exorbitant.

Jack rabbit starts eat tire treads. Even if you don't notice wheel spinning, slippage is there all the same. And rubber under torsion is subject to rapid wear. If your tires look like they had been through a dull buzz saw under low mileage conditions, brother, you're a cowboy.

Jack rabbit starts overwork axles, the differential, the drive line. It's safe to say that 75 per cent of these broken axles are a direct result of some form of driver abuse. If you're driving a heavy truck, you can spring axle housings, damage the ring gear and pinion, break a shaft just by revving her up to high and letting out the clutch.

Even with light loads or with these light delivery type vehicles you can raise more hell in a few ill chosen moments than a drunk at a clam bake. Why is it that some guys insist upon beating up a pick up just because she'll take the gas?

Jach rabbit starts soon wear out a clutch—the lining or the facing or both—because you almost always slip the clutch to get the torque you need for that jet take-off. So don't complain, "My clutch is slipping." Might as well admit, "My jack rabbit starting is showing," when you burn her out.

Cowboys don't save any road time, but they sure, waste high priced equipment. And they're usually left with a truck that's a dog, instead of a jack rabbit. So take it easy with the spurs, Pardner. . . .

AUTOCAR TRUCKS ARE GOOD FOR YEARS AND YEARS

By replacing an inexpensive bushing, this Autocar owner prolongs indefinitely the life of a much more expensive spring bracket assembly.

An average of 128 renewable bushings are used throughout the Autocar chassis.

Their use permits Autocar to confine wear to inexpensive, easily replaced bushings instead of larger, more costly parts.

Bushings permit the use of different materials to meet different conditions. Connecting rods, brackets, levers, etc., employ bushings of soft metal to prevent scoring more expensive mating parts. Where limited motion or shock resistance is a primary consideration, invariably bushings of hardened steels are specified.

No other truck at any price can show as complete an application of bushings as Autocar.

They are one of the hidden values that permit Autocars to deliver top performance year after year and at minimum maintenance cost.

For more information on Autocars fill in and mail this coupon.

Autocar Division of The White Motor Company
Ardmore, Pa.

Please send me full information concerning Autocar's quality features.

Name_____

Firm Name_____

Address_____

Type of operation_____

No. of trucks in fleet_____

3D

AUTOCAR TRUCKS

Autocar Division of The White Motor Company • Ardmore, Pa.

Export: Drexel Building, Philadelphia 6, Pa., U.S.A.

Autocar Trucks are sold and serviced throughout the world

Laugh it off!

NOTE TO THE GALS: IF HE LOOKS YOU STRAIGHT IN THE EYE—YOU BETTER DO SOMETHING ABOUT YOUR FIGURE.

CCJ

Deacon: "Didn't that truck driver and the diner waitress make a pretty bride and groom? But where are they? They disappeared almost as soon as I married them."

Bridesmaid: "Their bus leaves in a few minutes. They're upstairs getting their things together."

Deacon: "What! So soon?"

CCJ

The Safety Director's little son had been a perfect hellion all day. His mother had warned him that she would see to it that papa gave him a large helping of hair brush upon arrival home from work. The boy met his father at the front gate and the talk went something like this:

"Daddy, did grandpa spank you when you were a little boy?"

"He sure did," replied the Safety Director.

"And did great-grandpa spank grandpa when he was a little boy?"

"He certainly did," responded daddy.

"Well, don't you think that with a little co-operation from me we can over-come this inherited sadism?"

CCJ

The President of Fleety-Fleet Express started about his business as usual the morning of his 25th wedding anniversary, and his wife was very much annoyed.

"Don't you realize what day this is?" she asked.

"Sure I do," replied the fleet operator.

"Well, let's celebrate by doing something unusual."

The trucker meditated for a moment, then he suggested quietly, "How about two minutes of silence?"

CCJ

Auto Parts Clerk: "Let's give the bride a shower."

Tool Crib Clerk: "Oh, goody! Count me in—I'll bring the soap."

The Freight Claim Department stenographer was visiting at a wooded retreat. She decided to take a swim in a nearby secluded pool, but neglected to take a towel with her. Following some brisk gymnastics in the water, she was allowing nature's balmy breezes to dry her, when she happened to hear a rustling in some nearby bushes.

"Who's there?" she called out.

"It's only me, Willie," replied a voice.

"How old are you, Willie?" asked the steno.

A wee, small voice replied, "79, dagnabbit."

CCJ

Terminal Manager's Son: "My mama told me I can't play with you because you don't say your prayers before eating."

Freight Solicitor's Son: "Who cares. I don't have to say my prayers before eating. My mother is a good cook!"

CCJ

HE WHO LOSES HIS HEAD IS USUALLY THE LAST ONE TO MISS IT.

CCJ

—"Cici Jay"—

"Did you blow, sir?"

MISCHIEVOUS MINNIE SAYS THAT HER BOY FRIEND IS A REGULAR FIRE-EATER. ALWAYS KISSING OLD FLAMES.

CCJ

Shop Roustabout: "My hands are suffering from hangover."

Parts Room Clerk: "Your hands?"

Shop Roustabout: "Yeah. Her husband came home unexpectedly and I had to hang over the window sill for 45 minutes till they turned out the lights."

CCJ

Truck Driver's Wife: "I'm worried about my husband. He keeps dreaming he is an electric refrigerator."

Psychiatrist: "That's nothing to be alarmed about . . . a lot of people dream that they're something or other."

Truck Driver's Wife: "I know, doctor . . . but he sleeps with his mouth open and that little light shines in my eyes."

CCJ

The Dynamometer Mechanic and the Bee-Line Mechanic had been out for a night on the town and were slowly making their way home in a weaving manner. Shortly, they came to a dark stretch of street and the Dynamometer Mechanic who was bringing up the rear, shouted with alarm:

"Watch out, there's a dragon behind, heesh gonna git me!"

"You're just seeing things," the Bee-Line Mechanic placated. "There's nothing here."

"Halp, halp. Now heesh got muh laig. Halp! Heesh gonna get me." Then, with a wild screech he fell down on the sidewalk. In a moment he began to sob bitterly.

"What's the matter now?" inquired the Bee-Line man.

"Look whoosh askin' whatsh thuh matter. You'd cry too, if a dragon ate you up."

CCJ

Greasemonkey: "What do you think would go well with my new purple and green socks?"

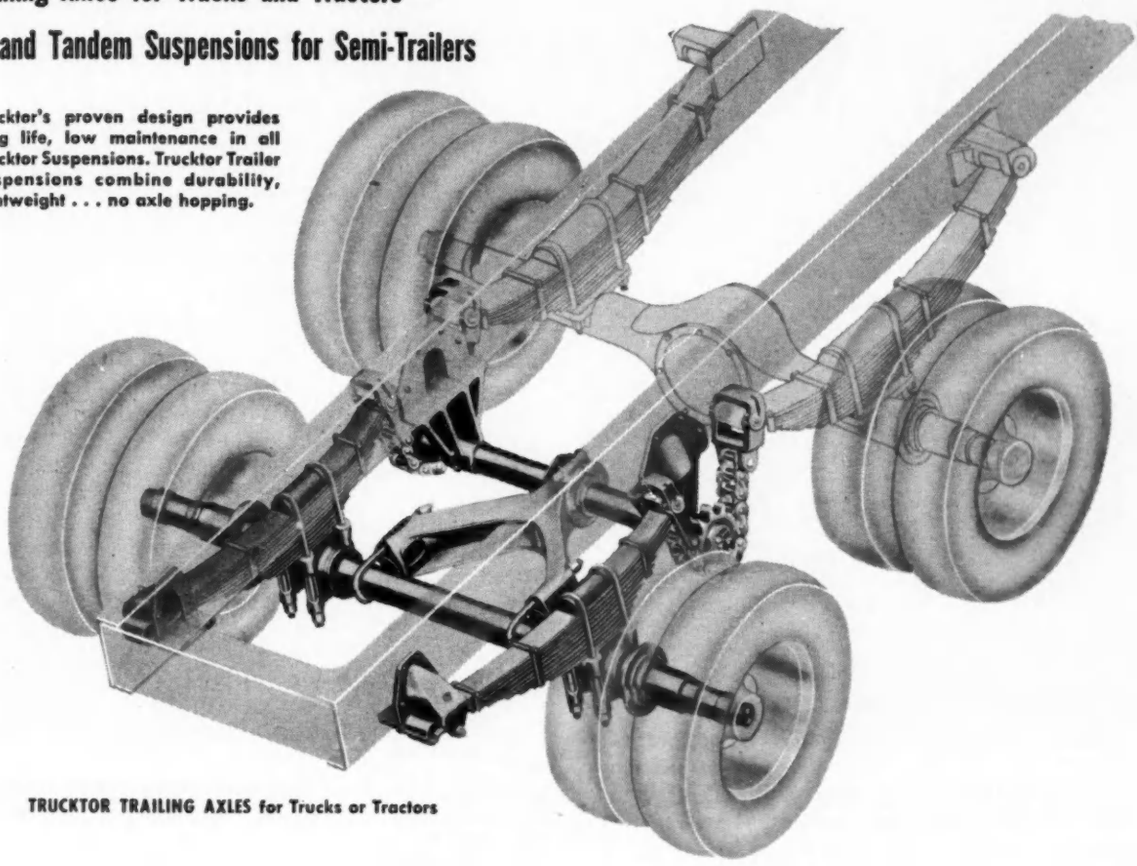
Air Brake Mechanic: "Hip boots."

Resume Work

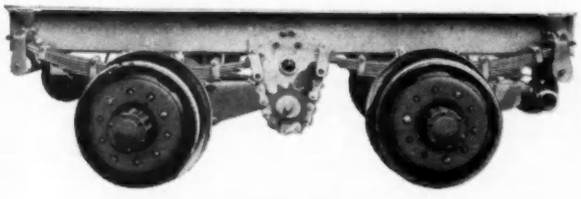
Trucktor QUALITY SUSPENSIONS

Trailing Axles for Trucks and Tractors—
Single and Tandem Suspensions for Semi-Trailers

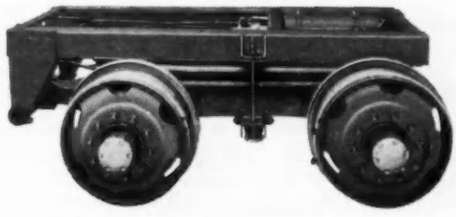
Trucktor's proven design provides long life, low maintenance in all Trucktor Suspensions. Trucktor Trailer Suspensions combine durability, lightweight . . . no axle hopping.



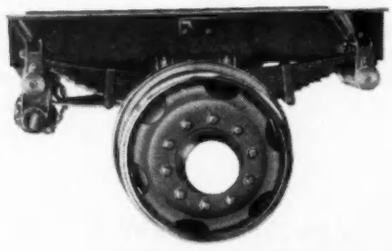
TRUCKTOR TRAILING AXLES for Trucks or Tractors



LIGHTWEIGHT TANDEM SUSPENSIONS for Semi-Trailers



NEW TRUCKTOR *Air Ride* TANDEM SUSPENSIONS for Semi-Trailers



SINGLE AXLE SUSPENSION for Semi-Trailers

NEW TRUCKTOR *Air Ride* SINGLE AXLE SUSPENSIONS for Semi-Trailers

For further information write to

THE TRUCKTOR CORPORATION

Route 22, Mountainside, N. J.

CCJ NEWS REPORTS

WASHINGTON RUNAROUND

by KARL RANNELLS Washington Correspondent

Excise Tax Rates . . . Probably No Change

Middle of last month, the House passed its excise tax bill continuing in effect until April 1, 1955, present rates on trucks, trailers, parts and accessories, as well as the 3 per cent tax on transportation of property. At press time, the Senate Finance committee reported the bill out without change in these taxes and it seemed likely the Senate would go along. White House position was still against excise tax cuts and the bill could be vetoed because it contains cuts in other excise taxes.

Knudson . . . Resigns from ICC

Interstate Commerce Commissioner and Defense Transport Administrator James K. Knudson has submitted his resignation in a letter to President Eisenhower. Knudson said the resignation was for personal reasons and that he expected to accept an offer of a position outside the government. He became a member of the ICC on April 20, 1950, after 20 years of service in other branches of the government.

Highways . . . $800 Million Aid Possible

Outlook is for passage sometime this month of legislation to boost federal aid to highways to $800 million annually for two years beginning July 1, 1955. This boost upward is contingent on retaining the 2 cents per gal federal fuel tax. If the gasoline tax reverts to 1½ cents or is lowered, the law would limit highway aid to $600 million.

ICC Fees . . . ATA Will Oppose

American Trucking Assns.' Legal Counsel James F. Pincknev said last month it appeared certain that ATA would file a statement of opposition to the proposed charges the Interstate Commerce Commission would assess carriers for its various services.

Reason Is . . . They Are Too High

Main reason is the thought that they exceed "nominal" amounts—are too high. As *tentatively* announced, fees charged for applications to the ICC would include: (1) $200 plus $50 for each state over one for operating authority, (2) $100 for a transportation broker's license, (3) $150 for exemption for entirely intrastate operation, (4) $150 for temporary operating authority over 30 days, (5) $300 for temporary operating authority pending approval of merger, (6) $175 for transfer of operating authority, (7) $1,000 for consolidation or merger, (8) $1,000 to purchase, lease, contract or acquire stock control of another carrier, (9) $1,000 for non-carrier to acquire stock control of two or more carriers, (10) $50 plus 1/50th of 1 per cent of the principal, par value or stated value with a $1,000 maximum for authority to issue securities or to assume obligation for securities of others, (11) $1,600 for approval of a collective rate making agreement, and (12) $250 for amendment to an approved intercarrier agreement.

Quick Rate Increases . . . May Be Closer

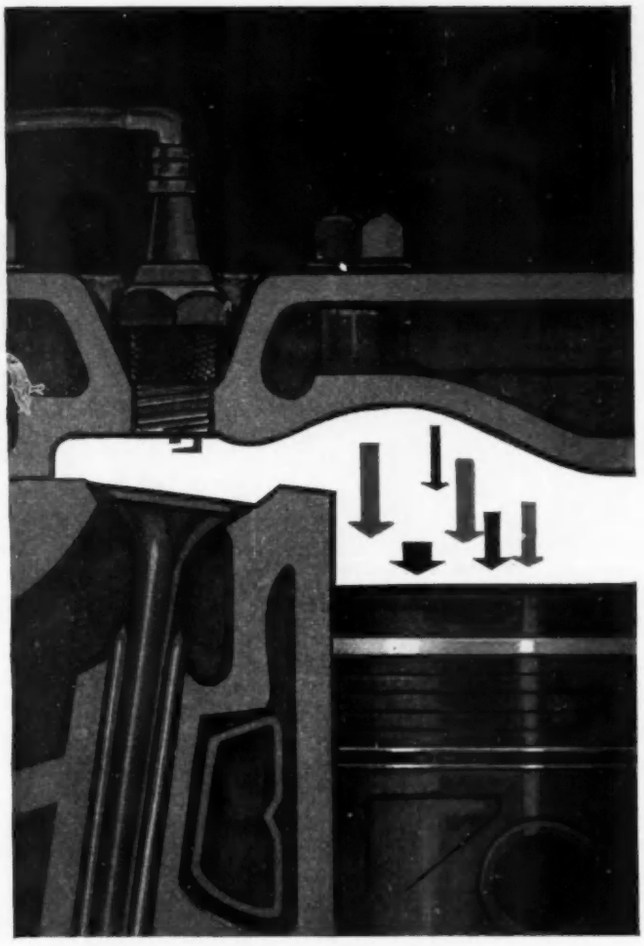
Senate Interstate Commerce Committee amendments to the "Quick Rate Increase" bill (S. 1461) reported favorably by the committee last June reportedly removed objections to the original bill and paved the way for Senate action late last month or early this month. Designed to speed Interstate Commerce Commission action in applications for rate increases, it requires a tentative ICC decision in 60 days but allowing another 60 days for final action. American Trucking Assns. has gone on record as supporting the amended bill.

Section 22 . . . Up for Amendment

New action has been taken on Capitol Hill to bring rates charged the government for transportation services in line. Under a bill (H. R. 8029), sponsored by Rep. Carl Hinshaw, R., Cal., the Interstate Commerce Act would be amended to remove language permitting government agencies to obtain reduced rates (Sec. 22, rates) for transportation of property and personnel. Bill has support of U. S. Chamber of Commerce which says present law permits agencies to play one carrier against another to obtain unfair bargain rates.

Fast Tax Write Off . . . Still Possible

New construction of terminals, repair shops and other facilities will continue to be eligible for fast tax amortization certificates provided construction can be started before the end of this year. Certificates will be harder to get since it is necessary to show that the proposed expansion ties in with defense.



WHERE IS PRESSURE GREATER···

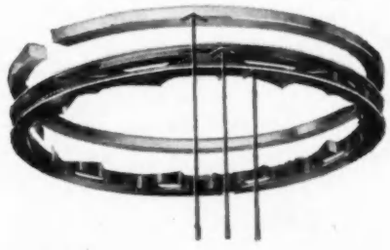
100 fathoms under the sea ...or inside a car's engine?

When combustion occurs, the pressure within the cylinders of an engine goes as high as 600 lbs. per square inch... actually *twice as high* as the pressure at 100 fathoms below the sea!

Old style top piston rings, operating where pressure is greatest, heat is highest and lubrication is poorest, wear *twice* as fast as modern chrome rings. That's why engine manufacturers use *top* rings plated with solid chrome...and 34 out of 36 install Perfect Circles.

In Perfect Circle's 2-in-1 Chrome Piston Ring Set, BOTH the top ring AND the oil ring rails are plated with thick, solid chrome for *complete* wear protection. They assure thousands of extra miles of sustained power and oil economy. Perfect Circle Corporation, Hagerstown, Indiana; The Perfect Circle Co., Ltd., Toronto, Ontario.

PROTECTION WHERE PRESSURE IS GREATEST



SOLID CHROME PLATING on both top and bottom rings give complete wear protection throughout entire area of ring travel. Rings are lapped-in at factory, making tedious break-in unnecessary.

Perfect Circle

2 in 1 Chrome Piston Rings

THE STANDARD OF COMPARISON

CCJ NEWS REPORTS

DETROIT DISPATCH

by LEN WESTRATE Detroit News Editor

Brake Performance . . . New Specs

Representatives of truck and trailer manufacturers and truck operators have proposed a revised table of brake performance for trucks. The recommendations will be presented to a subcommittee of the Uniform Vehicle Code Committee for consideration as replacement for the current 30 ft at 20 mph specification. It includes three categories of vehicles: (1) light vehicles 10,000 lb GVW and under, (2) single vehicles above 10,000 lb, and (3) all other vehicles. Suggested deceleration rate would be 14 ft per sec for all categories, and maximum stopping distances would be 30, 45 and 60 ft respectively. If adopted, the new standards probably would also be accepted by ICC.

Roads . . . Cost Study Coming

Fruehauf Trailer Co. has completed a study of road construction costs. It will be presented to the trucking industry shortly. Directed by Prof. John Worley, University of Michigan, the study is designed to provide the industry with a specific program which can be presented to highway authorities when they attempt to allocate a fair share of road costs to the trucking industry. The study relates basic road costs to the additional expense of constructing highways adequate for truck traffic.

Clutches . . . Multi-Plate Units

There is some indication of a trend toward adoption of smaller-diameter, multiple-plate clutches in larger trucks to replace single-disc units. With engine speeds increasing, peripheral clutch speeds are going up, resulting in some trouble from the linings tearing loose under certain conditions, causing a forced engagement of the clutch with damage to the gear box and clutch housing. Use of two or more plates of smaller diameter brings rim speed down with equivalent or better clutch life.

Truck-Trailer Brakes . . . to Be Tested

The joint AMA-TTMA committee on brake coordination is getting ready to run brake tests on truck-trailer combinations. Purpose is to get up to date information. Data currently available were collected several years ago in connection with the BPR report. The tests also are to determine if brake performance can be improved through modification of the present components and to define brake power requirements which must be supplied by the tractor to the trailer brake system for adequate braking of the entire unit. The tests will be confined to air brakes only.

Muffler Noise . . . and Older Trucks

The new muffler noise standard established for new vehicles will have no bearing on the 9½ to 10 million trucks on the road. The complex instrumentation is costly and requires trained techniques not available to most law enforcement agencies. Also the standards are set up for only the latest trucks. General opinion in the industry is that states should follow provisions in the uniform vehicle code. These require the muffler to be in good working order, in constant operation, and have no excessive or unusual noise or smoke. A muffler approved under the new standards on an older truck may not have the desired results because the whole exhaust system is engineered as a unit.

Drivers . . . Being Researched

The National Automobile Transporters Assn. has started research on the effect physical and mental problems of truck drivers have on their efficiency and safety performance. NATA's accident prevention committee will delve into such factors as (1) induced drowsiness through monotonous driving conditions, (2) effect of speed on prolonged driving performances, (3) relationship between highway conditions and driver behavior, and (4) limits of psychomotor ability of drivers to their equipment.

Pontiac . . . Drops Truck Production

Pontiac Division, General Motors, no longer is in the truck business. The division has dropped from its line the sedan panel delivery model which it has been offering since 1949. Pontiac produced only 1324 of the units last year, decided that the market is too small to justify continuing.

Hydra-Matic . . . for Heavy Trucks

Although GMC Truck has announced its Twin Hydra-Matic drive for heavy duty trucks, it will be June before it will be available to buyers generally.

APRIL ROUNDUP

by ERNIE FOREST Assistant Editor

1953 Tonnage . . . A New Record

Interstate Commerce Commission reports from 1457 Class I Motor Carriers of Property indicate a 9.3 per cent increase in tonnage hauled in 1953 over 1952 according to the year-end report from the Research Dept. of American Trucking Assns. ATA's Truck-loading Index stood at a record high of 270, based on 1941 as 100. In 1952, the previous high mark, the index was 247. A full statistical report on 1953 begins on page 115 of this issue with detailed tonnage data on page 122.

1953 Excise Taxes . . . Yield Up 10 Per Cent

Federal automotive excise taxes collected in 1953 also reached a record high of $2.3 billion, as compared with $2.1 billion in 1952. Included in the total were gasoline—$817.3 million, diesel fuel—$15.7 million, lubricating oil—$72.9 million, automobiles and motorcycles—$905.6 million, trucks, buses and trailers —$187.8 million, tires and tubes—$170.0 million, and parts and accessories—$150.7 million.

WASHO Road Test . . . Near Stopping Point

Report is that regular runs on the WASHO Road Test, near Malad, Idaho, will cease on May 29. After this date, certain special tests to complete the study will be performed, and the job of tabulating the data and compiling the test report will begin. Testing at the sight was resumed Feb. 17, after the scheduled winter lay-off. Damage since then has not been as great as was noted last summer, probably due to a drier-than-normal fall and winter.

Piggy-Back . . . Ban, Expand, Restrict

This past month, trailer-on-flatcar developments included: (1) a petition by Mid-States Freight Lines, Inc., Chicago, to the ICC asking that the RR's be prohibited from using their own trailers in "piggy-back" service for lcl freight; (2) a request for bids from the Erie RR for 100 75-ft flatcars for possible rail-trailer use; and (3) a statement by Rail-Trailer Co. President E. F. Ryan that the service should be restricted to common carriers. He said his company has a contract with the New York Central RR for operation of the service and is presently developing sufficient volume. Also heard was that General Motors Electromotive Division has tentative orders for about 300 rail-trailer cars.

Ton-Mile Taxes . . . 1 In, 2 Out, 1 to Go

Box score for new ton-mile taxes so far this year, not including Georgia's retaliatory round-trip levy, is 1 in, 2 out, 1 to go. Colorado's levy was passed, increases both registration fees and the per-mile rate. (Details are given further on in this section under the heading "New State Laws".)

In Virginia and Kentucky, ton-mile taxes under consideration have been killed. Proposed weight limit increases in these two states died at the same time Kentucky may call a special legislative session later this year for reconsideration of both items.

New Jersey's proposed ton-mile levy had not been introduced into the legislative hopper at press time, but newspaper reports indicate that it definitely will be on the legislative floor again this year.

Trip Leasing . . . Two Hot Spots

Action on trip leasing in two spots is scheduled this month. At press time, the Senate Interstate Commerce Committee had taken no action on HR 3203, a bill which would stop the Interstate Commerce Commission from regulating duration or method of payment for trip leasing. Next scheduled meeting of the committee is April 14.

On the same day, the ICC has scheduled public hearings in Washington on the same two leasing subjects under the proceedings docketed as Ex Parte No. MC-43.

Reciprocity . . . ATA Takes a Stand . . .

Meeting in Chicago last month, ATA's Executive Committee adopted a nine-point statement of policy on truck taxation and reciprocity. It was developed by ATA's Special Reciprocity Committee that met just prior to the Executive Committee. A special sub-committee, composed of members of both committees, has been appointed to supplement the nine points with specific proposals for probable discussions with the governors of the various states at their meeting in Washington the 26-28 of this month.

Bars . . . Third Structure Taxes

Said the ATA statement: (1) Highway user taxes paid by the trucking industry should be limited to registration fees and motor fuel taxes. (2) Such taxes should be equitably distributed among the states. The

(TURN TO PAGE 372, PLEASE)

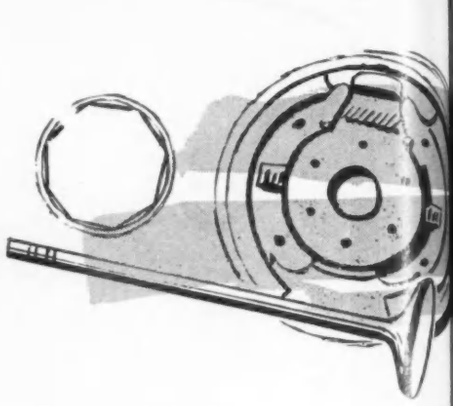
SECTION 1

TRUCK & BUS MAINTENANCE

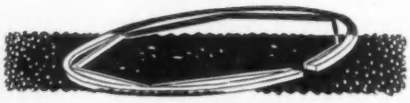
Wear Limits 68
Engine Troubleshooting 73
Truck Service Data 78
Bus Service Data 101
Engine Service Data 104
Component Parts Table 108
Spark Plug Heat Range Chart 111
Engine Power Ratings 112
Passenger Car Data 114
Addresses of Manufacturers 252

1954 COMMERCIAL CAR JOURNAL'S FLEET OPERATORS' REFERENCE ANNUAL

WEAR LIMITS Charts and Data



Covering operating tolerances and adjustments as recommended by manufacturers for fitting pist



PISTONS, RINGS, PINS

Piston Ring Size

The correct ring size is determined by the smallest cylinder measurement, which will be found by miking below the ring travel. Consult following table to see if ring gaps must be filed to fit odd cylinder sizes.

Smallest Cylinder Measurement	Correct Ring Size	End Clearance Fitting
std. to .010	standard	None
.011 to .019	.020 oversize	File fit
.020 to .024	.020 oversize	None
.025 to .029	.030 oversize	File fit
.030 to .034	.030 oversize	None
.035 to .039	.040 oversize	File fit
.040 to .049	.040 oversize	None
.050 to .059	.060 oversize	File fi
.060 to .06[illegible]	.060 oversize	None
.070 to .079	.080 oversize	File fit
.080 to .089	.080 oversize	None
.090 to .099	.100 oversize	File fit
.100 to .109	.100 oversize	None

Piston Ring Side Clearance

CAST IRON PISTONS

.002 —.0035	Compression Ring Grooves
.0015—.003	Oil Ring Grooves

(For diameters up to and including 3 15/16. For diameters between 4 in. and 8 in. the side clearance is increased .0005 in. in all cases.)

Torsional twist type compression rings should have an additional .0005 side clearance over the above figures.

Ring grooves worn to excessive side clearance should be reconditioned and groove spacers installed. Check pistons for worn grooves and, if more than .005 side clearance exists, recut grooves to accommodate the next ring width or use the original width ring plus a wide groove spacer. Check for bellmouth ring grooves at the same time that ring side clearance is checked. It is entirely possible for a ring groove to be worn in this manner and, although side clearance may not appear to be excessive, premature failure of the installation could result from installing rings in grooves in this condition.

NOTE: One manufacturer supplies .024 wide groove spacers. If these are to be used, recut grooves only .025 over the original size. Sealed Power supplies the GI-60 contracting groove insert which anchors itself to the top of the ring groove and is locked there by its own outward tension—for combatting top ring groove wear.

Hastings supplies a locking type groove insert .024 wide. This spacer anchors itself to the top of the widened ring groove by its own contracting tension. Special tools to re-cut pistons are supplied which provide a recess in upper corner of ring groove.

Piston Ring End Clearance

Cyl. Diameter, In. Incl.	End Clearance, In.
1 to 1 31/32	0.005 to 0.013
2 to 2 31/32	0.007 to 0.017
3 to 3 31/32	0.010 to 0.020
4 to 4 31/32	0.013 to 0.025
5 to 6 31/32	0.017 to 0.032
7 to 8	0.023 to 0.040

Hastings suggests that from 4 in. up chrome faced compression piston rings should have more end clearance than is specified here. 4 to 4 31/32—.015-.030; 5 to 6 31/32—.019-.040; 7 to 8—.030-.060.

These tolerances are held in the standard cylinder diameters and if there is any cylinder wear, the maximum permissible gap will increase proportionately.

Piston ring end clearance should always be measured at the smallest part of the cylinder bore, usually at the bottom of the cylinder below the ring travel. If ring end clearance is in excess of clearances shown in the chart by .030, a ring .010 larger in diameter should be used.

Cylinder Wear

Type Set	Maximum Taper	Maximum Out of Roundness
Plain	.003	.001
Expander (cast iron)	.006	.002
Expander (steel oil)	.015	.004

Where the cylinder taper does not exceed .003 in., the so-called rering job will generally give satisfactory results with conventional compression and oil rings.

Where the cylinder taper is in excess of .003 in.—and if it does not exceed .015 in. —and it is impractical to recondition the engine, a rering job will generally give satisfactory results with spring type rings.

Any cylinder with over .015 in. taper and .004 in. out of roundness should be rebored even though the rings are designed to operate in much greater tapers. Maximum out-of-roundness permissible is .005 in. If the cylinder has holes or pockets or waves which are more than .001 in. deep, or a ridge at the bottom of the ring travel area, the cylinder should be rebored.

Wilkening recommends the steel oil ring for engines with a maximum taper of .002 and a maximum out-of-roundness of .001.

Cylinder Finish

Recommended cylinder finish in all rebore, rering and resleeve installations is 15 to 30 microinches RMS. with a cross hatch pattern of scratches. In rebore and resleeve installations the use of a 200-250 grit hone stone is recommended. Hone must be allowed to cut-self free with no pressure upon removal. In a rering installation the recommended finish can be obtained by using a deglazer with 3/0 emery cloth or by using a flexible hone with stones no finer than 220 grit.

Remove any abrasives from the porous cast iron surface of the cylinder wall with a stiff bristle brush. Scrub the bore vigorously with a heavy solution of ordinary soap suds and rinse off with clear water.

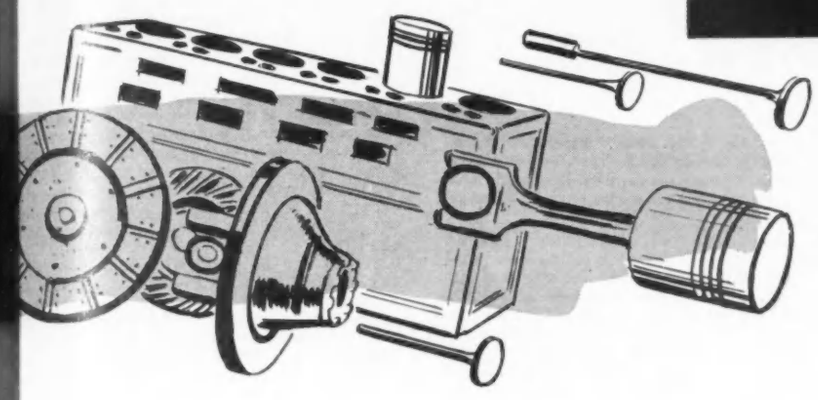
Piston to Cylinder Fit

If the piston skirt diameter is such that the clearance between it and the smallest diameter of the cylinder is 1½ times as much as the clearance recommended by the manufacturer, the pistons should be resized. Pistons should always be resized before piston pin holes are reamed for replacement pins. On pin-fitted pistons the pin holes have been precision bored to exactly the correct size, so they should not be reamed or honed.

Piston Clearance

CAM "A"—Chevrolet Six cast iron pistons must be cam ground with cam "A." Any cast iron piston in the automotive range can be cam ground with cam "A" at the option of the user. Use the following clearances when finishing either round or with cam "A":

The following companies have cooperated with CCJ in supplying up-to-date wear limit data for this section: Aluminum Company of America; Eaton Mfg. Co.; Federal Mogul Corp.; Hastings Mfg. Co.; Koppers Co., Inc.; Lipe Rollway Corp.; McQuay-Norris Mfg. Co.; Monmouth Products Div. Cleveland Graphite Bronze Co.; Moog Industries, Inc.; Ohio Piston Co.; Perfect Circle Co.; Ramsey Corp.; Sealed Power Corp.; Spicer Mfg. Co.; Thermoid Co.; Thompson Products, Inc.; Toledo Steel Products Co.; United Engine & Machine Works; U. S. Asbestos Div. Raybestos-Manhattan, Inc.; Wel-Ever Piston Ring Co.; Wilkening Mfg. Co.

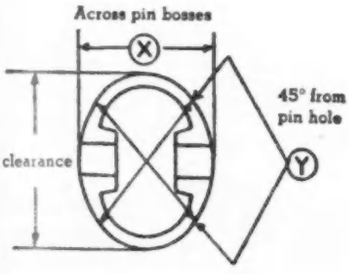


fitting pistons, rings, bearings and valves

Cyl. diam.	3	3¼	3½	3¾	4
All lands	.012	.013	.014	.015	.016
Skirt	.003	.00325	.0035	.004	.0045

Cyl. diam.	4¼	4½	4¾	5
All lands	.017	.018	.019	.021
Skirt	.00475	.00525	.00575	.00625

Note: On new numbers where specific grinding information is not given on this chart, select a piston of similar type and diameter and give the new piston the same clearance.



After cam grinding pistons check the diameters at X and Y as shown above to be sure the pistons have the proper reduction in diameter at these points.

Piston Skirt Clearance

Finish the diameter slightly taper on all pistons with the open end .0005 to .001 in. large. Make certain that the piston is properly positioned into the cylinder bore with respect to combustion chamber requirements.

Piston Pin Clearance

Pin fits naturally depend upon the accuracy and percentage of bearing surface in the pin hole. The more accurately a pin hole is finished, the looser the pin will feel with the same clearance.

When rod bushings are finished on up to date equipment, a slight clearance for an oil film should be allowed. A properly fit pin will almost drop through the rod bushing of its own weight when tried dry, but will have a drag when oiled.

CAM "A"—Ford "A" and "V8" pistons, and all pistons of the all-aluminum type having a split skirt completely open from top to bottom, use cam "B." Use the following clearances when grinding round. Skirt clearance should be cut in half when using cam "B":

Cyl. diam.	3	3¼	3½	3¾	4
All lands	.020	.021	.023	.025	.027
Skirt	.00225	.0025	.00275	.00325	.0035

Cyl. diam.	4¼	4½	4¾	5
All lands	.030	.033	.036	.039
Skirt	.00375	.004	.00425	.0045

CAM "C"—Must be used on all T-slot or U-slot flexible skirt all-aluminum pistons, having a solid section at bottom of skirt, from 2¾ to 3 7/16 in. diameter.

CAM "D"—Must be used on all T-slot or U-slot flexible skirt all-aluminum pistons, having a solid section at bottom of skirt, from 3½ to 4 15/16 in. diameter.

Use the following clearances with both cam "C" and "D":

Cyl. diam.	3¼	3½	3¾	4
All lands	.021	.023	.025	.027
Skirt	.00175	.002	.00225	.0025

Cyl. diam.	4¼	4½	4¾
All lands	.030	.033	.036
Skirt	.00275	.003	.00325

CAM "E"—Must be used on Nelson Autothermic pistons. Same shape as cam "B" but with .013 in. drop at pin which is necessary because of the solid skirt. Also use "E" on all U-slot pistons.

Cam Grinding

Cam	Diameter Reduced at X	Diameter Reduced at Y
A	.004 to .006	.0005 to .0015
B	.005 to .007	.0025 to .0035
C	.008 to .010	.0075 to .0085
D	.011 to .013	.0095 to .0105
E	.012 to .014	.006 to .007

Cam Finishing

This method of piston finishing produces longer piston and ring life and most quiet piston operation. The various piston types require different cams for finishing as illustrated. These cams, together with the piston grinding machine, produce the correct piston contour and correct clearance at the piston pin bosses. Clearance on the piston thrust faces is controlled by the operator.

The data indicates the recommended clearance per inch of piston diameter. This data is supplied for both cam grinding and where the skirt is ground round. In either case the ring grooves are ground round and the clearance per inch of diameter is indicated in the clearance chart. "Lo-Ex" alloy has a lower coefficient of expansion than other aluminum alloys, and consequently, in using these figures for other aluminum pistons, 20 per cent more clearance should be provided.

Because of the bimetallic construction of DUALOY pistons the following special procedure should be used when turning the ring lands: Center the lathe tool in the top groove and feed it in to the depth of cut. (Depth of cut should not exceed .030.) Engage the carriage feed so that the tool will move across the top land cutting first into the ni-resist and then into the aluminum above it. After the tool has passed beyond the piston head reverse the carriage thus causing the tool to pass over the already cut top land to

(Turn to Next Page, Please)

Thrust Face and Ring Land Clearance

PISTON TYPE	FOR CAM GRINDING: Cam No.	FOR CAM GRINDING: Thrust Face Clearance Per Inch of Piston Diameter at Top of Thrust Face	For Pistons Ground Round: Clearance Per Inch of Piston Diameter	RING LANDS: Clearance Per Inch of Diameter Ground Round: Top Land	Second Land	3rd & 4th Land
Cast Iron for Passenger Cars	A	.0004 to .0006	.0007 to .001	.005	.003	.002
Cast Iron for Trucks-Tractors	A	.00045 to .00065	.00075 to .0015	.006	.004	.003
Trunk Type Solid Skirt, Aluminum Lo-Ex up to 3⅛ diam.	C	.001 to .0015	.002 to .0025	.007	.005	.004
Trunk Type Solid Skirt, Aluminum Lo-Ex 3⅛ diam. to 6"	D	.0015 to .002	.003 to .0035	.007	.005	.004
Lo-Ex Split Skirt	B	.0003 to .0005	.0006 to .00075	.007	.005	.005
Lo-Ex Split Skirt Heavy Duty	B	.0003 to .0005	.001 to .00175	.007	.006	.005
Lo-Ex T & U Slot to 3⅛ diam.	C	.0003 to .0005	Must be cam ground	.007	.005	.005
Lo-Ex T & U Slot 3⅛ diameter to 5" diameter	D	.0004 to .0007	Must be cam ground	.007	.005	.005
Nelson Patent Single Control Narrow Strut Lo-Ex	B	.0003 to .0005	.0006 to .00075	.007	.006	.005
Nelson Patent Broad Strut Lo-Ex	B	.0003 to .0005	.0006 to .00075	.007	.006	.005
Nelson Patent Double Strut Lo-Ex	D	.0005 to .0007	.0006 to .00075	.007	.006	.005
Translot Heavy Duty	D	.001 to .0015	Cam G	.007	.006	.005
Translot Passenger Car	D	.0003 to .0015	Cam G	.007	.006	.005

Wear Limit Charts and Data

Continued from Page 69

the top groove after which it will cut down towards the skirt cutting first into the bottom half of the ni-resist ring and thence across the remaining aluminum lands. It is recommended that the lands be ground to finish size, after turning.

Clearance Chart
(ALLOY AND CAST IRON PISTONS)

1. Skirt clearances are indicated as minimum clearances.

2. Pistons should be measured with pin removed. Heat piston before removing pin and allow sufficient time for piston to return to room temperature.

3. All pistons should be ground to a sharp edge at the open end of the skirt.

4. Pistons to be tin-plated should be ground to regular clearances and then plated with tin .0005 thick on pistons smaller than 4 in. diameter and .001 thick on pistons larger than 4 in. diameter.

5. Pistons should be installed so that the FRONT stamped on the head points to the front of the engine.

6. Break corners of all ring grooves .005 to .010 x 45 deg. with a file when finishing a piston.

7. Chamfer top of skirt 1/32 v 10 deg. when finishing a piston.

SLEEVES

Dry Sleeve Fitting—
Sealed Power Corp.

DRY TYPE WITHOUT FLANGE

Sleeve must have press fit in block of .0005 (½ thousandth) per inch of bore dia.: thus a 3 in. O.D. sleeve will have .0015 press, a 4 in. O.D. sleeve will have .002 press, etc.

Before boring block find actual O.D. of sleeve in this manner: (a) Mike the sleeve O.D. in three places 120 deg. apart at top and bottom. (b) Add all 6 readings together and divide by 6. This will give you the actual O.D. from which to figure boring size in block. It is best to do this after cutting sleeve to proper length. Always cut off the end opposite the inside chamfer.

Locate boring bar centrally by "cats paws" or other means given in instructions with your bar.

Do not attempt boring to size with one cut. Follow instructions given with bar you are operating. In any case the final cut should not exceed .040 on diameter in order to end up with a hole which is straight, round and to predetermined size.

Round off bottom outside corner of sleeve and upper corner of block with a fine file. This is necessary to prevent galling during installation.

If entire block is to be sleeved, do not bore or sleeve each cylinder in succession as strains may be set up which will distort the block. Start with No. 1 and do all odd numbers, then come back to No. 2 and complete even numbers.

Dry Type with Flange

After removing old sleeve, hone out block from .001-.0015 (one to one and one-half - thousandths) larger than actual sleeve O.D. After honing, clean out bore and try sleeve fit. You should be able to insert up to ½ of sleeve by hand push. Clean all scale or dirt from counterbore in block. Turn sleeve upside down and set in counterbore to make sure the flange fits properly.

Round off lower outside corner of sleeve and top of block bore with a fine file. Apply coat of metallic seal to sleeve O.D. Line up any cut-outs on sleeve and push quickly into place. Tap sleeve lightly with rawhide or plastic hammer to make sure it is all the way down.

In event the block is not sleeved originally, bore block. Find the actual size of flange O.D. and counterbore block .005 (five thousandths) larger. The depth must be the same as the width of flange.

After installation—check bore size and finish if required. Wipe off all surplus sealing compound from inside of block.

Finishing

Bore semi-finished sleeves to within .001-.002 (one to two thousandths) of finish size desired.

Rough hone to within .0005-.001 (one-half to one thousandth) of finish size. Use a fast and steady up-and-down movement of hone so as to produce stone marks with a well defined diamond shaped pattern. Expand stones gradually—don't use excessive pressure as you are apt to rupture the granular structure of the surface metal. When stones "squeal" the pressure is too great, the stones are loaded or both. Dress off face of stones with another stone or a very fine file. It also helps to relieve the training edge of the stones similar to the back clearance of a lathe tool.

Change stones and finish hone to final size. If your hone is one designed to be operated dry, follow instructions given by manufacturer.

Roughing stones suggested for wet honing.

(a) Unhardened sleeves & blocks: C150 JV or KV; C180 JV or KV
(b) Hardened sleeves: C100 JV or KV; C120 JV or KV

Finishing stones suggested for wet honing.

(a) Unhardened sleeves & blocks: C320 IV or JV; C400 IV or JV
(b) Hardened sleeves: C180 HV or IV; C220 HV or IV

Letter "C" means silicon carbide, numbers 80, 100, etc., size of grit; letters J, K, etc., the hardness; V means Vitrified bond.

Honing lubricants—lard, lard oil, kerosene and vegetable shortenings are satisfactory; Some oil companies now have a "honing compound" which is made especially for this purpose and should be used where available. After finish honing, check piston in bore with feeler to be sure you have recommended clearance.

Wrap a piece of Wet-or-Dry paper (320-400 grit) around stone, dip in light oil and run up and down the bore 15 to 20 times with hone expanded to touch gently while rotating. This will pick up the greater portions of abrasive particles and metal fragments. Crocus cloth will also be satisfactory. Use stiff bristle brush and scrub bore vigorously with heavy solution of ordinary soap suds. Rinse off with clear water. Apply generous coat of heavy motor oil to bore and wipe out well with soft paper toweling or paper handkerchief.

Dry Sleeve Fitting—
White Machine Works

After cylinder head, oil pan and connecting rod assembly have been removed, the old sleeve may be pulled or pressed out of its receptacle in the block by using a sleeve puller or shop press. Be careful that no scratching or scuffing occurs in the block, that would affect the fitting and roundness of the new sleeve after it is installed. All dirt, rust, and carbon deposit in the receptacle must be removed.

Next comes the important point of accurately measuring the receptacle to determine if it is standard or oversized, and to what extent it is damaged by warpage, distortion, and previous servicing methods. First adjust to proper torque all block studs and cap screws, also all stud nuts except for cylinder head. Check carefully with accurate gage the actual size and condition of the sleeve receptacle. The best job can be done with multiple point gages, because it is physically impossible to accurately measure an out-of-round cylinder with a two point instrument. If the receptacle is as much as .0025 in. (2½ thousandths) oversize or out-of-round, it should be bored to an exact oversize for which sleeves are available and oversized outside diameter sleeves installed with proper "press" or "shrink" fit.

With all dry type sleeves it is imperative for best performance that all possible outside surface of the sleeve contact or bear directly on the block in order to gain proper support and maximum efficiency in dissipation of heat. The amount or measurement of "press" or "shrink" fit varies according to models, from .001 in. (one thousandth) on some extremely thin walled sleeves with 1/16 in. thickness to as much as .005 in. (five thousandths) on heavier types. About .003 in. (three thousandths) is average. "Shrink" fitting is most desirable on thin walled sleeves. Use dry ice, refrigeration, or CO^2 fire extinguisher until sleeve is frosted, and then drop in receptacle with pliers or gloved hand.

"Press" fitting may be done with shop press, air hammer, or block of wood; also by reversing action with sleeve puller. Where sleeve receptacles are .001 in. or .002 in. oversize, and in otherwise good condition, it is advisable to coat the outside of the sleeve with one of the commercial products now available to insure improved sleeve contact with its receptacle. Such "fillers" are not necessary if sleeve and hole size are correct.

MAIN BEARINGS AND CONNECTING RODS

Bearing Tolerances

CRANKSHAFT—A shaft worn to the extent that the bearing surfaces are ridged and scored is unfit for use and must be reground.

JOURNALS: Should not be more than .003 in. (a) out-of-round.

CRANKPINS: Should not be more than .002 in. out-of-round. If main journals or crankpins exceed these tolerances, the shaft is unfit for further use and must be reground.

CRANKCASE—Bearing Saddle Bores Must be round within .002 in. (b) and in true alignment lengthwise for use with precision insert main bearings. Maximum out-of-round journals should not be used with maximum out-of-round case bore.

MAIN BEARINGS — Spread (width across the open ends) should exceed the crankcase bore diameter by .005 in. to .0[illegible] in., depending on the thickness and structural stiffness of the bearing.

CONNECTING RODS — Crankpin bearing bore and the piston pin bushing bore must be parallel with each other within .001 in. in 6 in., and the twist between these bores must not exceed .001 in. in 6 in.

ROD BORE: Must be round within .002 in. (c) Maximum out-of-round rods should not be used with maximum out-of-round crankpins.

ROD BEARINGS: Spread (width across the open ends) should exceed the rod bore diameter by .005 in. (d) to .020 in., depending on the thickness and structural stiffness of the bearings. The Ford earlier V8 floating rod bearings are exceptions to this rule.

CAMSHAFT BEARINGS—After an engine has used up two sets of main and connecting rod bearings, the camshaft bearings are a potential source of trouble due to wear and should be checked for possible replacement.

The above represents salvage limitations. Longer life can be expected if the conditions are better.

Crankshaft End Clearance

FOR THE RODS, it is sufficient to be sure that the fillet at the ends of the crank pin does not bind on the end of the crank pin bearing. A clearance of .004 in. to .010 in. is recommended.

FOR THE CRANKSHAFT, end play or clearance is recommended as follows:

Crankshaft Journal Diameter	Crankshaft End Clearance
2 to 2¾	.004 to .006
2 13/16 to 3½	.006 to .008
3½ plus	.008 to .010

Bearing Oil Clearances

The general rule for the size of the oil clearance, for pressure lubricated bearings, is to allow .001 for each inch of journal diameter, subject to modification depending upon the bearing metal alloy used, i.e.:

Type of Bearing	Shaft Diameters 2" to 2¾"	Shaft Diameters 2 13/16" to 3½"
Lead and Tin Base Babbitts	.0015-.0025	.0025-.0035
Cadmium	.002-.003	.003-.004
Copper Lead	.0025-.0035	.0035-.0045

Maximum allowances given by Cleveland Graphite Bronze are lower, as noted:

(a.) Journals—.002 in.
(b.) Bearing Saddle Bore—.001 in.
(c.) Con Rods Bore—.001 in.
(d.) Rod Bearings—.020 in.

General Recommendations

In selecting replacement bearings, it is advisable that the manufacturer's original equipment specifications be followed as to bearing materials and running clearances. It is absolutely necessary that the crankshaft journal and crankpin sizes be accurately established so that the replacement bearing can be supplied which will have the correct oil clearance. To do this job, micrometers and bore gages should be used whenever possible.

After a crankshaft is reground, the ground surfaces must be lapped and polished to obtain a satisfactory smooth finish, i.e., 20 RMS maximum. A ground finish only is considered top rough and will result in a high rate of both shaft and bearing wear. After grinding and polishing, the crankshaft must be washed and all internal oilways thoroughly cleaned. Fillet radii should be checked to insure non-interference with the ends of the bearings.

The bolt torque specifications, as furnished by the original equipment builders, should be strictly adhered to. Proper torquing of the studs or nuts is a very important and essential factor. The best assembly is obtained if the proper torque is applied with a torque wrench alternating from one side of the bearing cap to the other so that the caps are drawn down evenly.

WEAR LIMITS

In case crankcases are rebored, the following important items should be checked:

1. Bore finish not to exceed 80 RMS.
2. Size, taper, and out-of-roundness.
3. Reboring with proper torque applied to nuts.
4. Bore alignment check with alignment bar.

After it is determined that all parts and clearances are satisfactory, the final assembly may be completed, with the close observation of the following items:

1. Freedom of dirt, nicks, scratches and burrs.
2. Correct positioning of bearing tangs or locking lugs.
3. Correct arrangement of case and rod caps.
4. Bearing oil hole alignment with crankcase oil hole.
5. A clean engine, thoroughly cleaned oilways, crankcase and other parts.
6. Break-in light oil with engine break-in practice ordinarily used for cylinders, pistons and valves.

VALVES

Valve Seat Runout

Both the seat in the block or head, as well as the face of the valve itself should be checked by means of a dial indicator for runout. The valve seat should be concentric with the guide to within .0015 to .0025 total indicator reading.

The valve face should be concentric with the stem to within .0025 to .003. (Actually valve and valve seat runout should be as low as possible, and should not exceed .002.)

It is advisable to periodically check dial pilots as a bent pilot will result in a false reading. Worn or bell-mouthed guides may also cause false readings; replace them if worn beyond limits shown in Valve Stem Wear and Guide Clearance section.

Rotating Valves

There are three types of rotating valves in current use: the positive type rotator, the Ford type rotator, the release type rotator. The positive type and Ford type of rotators do not require adjustment.

The release type, however, requires periodical checking and adjustment since its operation is dependent upon the clearance between the tip cup and valve tip. This clearance must be maintained. If the clearance is greater than the specified high limit, the tip cup should be ground. If clearance is less than specified, the valve tip should be ground. Special gages for checking tip to tip cup clearance are required.

With valve rotation, it is possible to use a wide seat and thus obtain the added cooling effects of a greater seating area. With valve rotation an interference angle between seat and valve face is not required. The interference angle should, however, be used where recommended by the original equipment manufacturer or where failure had resulted due to seat distortion.

The valve face should be concentric with the stem to within .0025 to .003. Bent pilots and worn guides will give false readings. Replace guides not up to these standards.

Valve Seat Widths

Valve seat widths will vary according to design and dimensions of the valve head, type of engine and conditions of operation. The general rule is a wide seat for a hot running engine and a narrow seat for a cool running engine, for longer valve life.

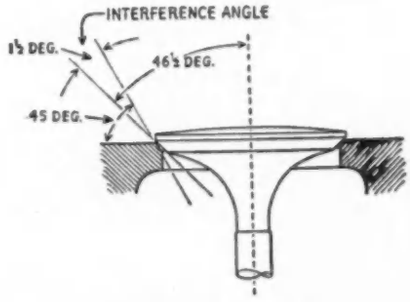
The valve seat width further is governed by the thickness of the valve head margin, or that portion of the valve which extends from the top edge of the valve head to the top edge of the valve face. This sometimes is referred to as the edge thickness and serves a definite purpose of providing a heat dam to protect the valve seat and face from the heat of combustion. A thin margin offers no protection and hastens warpage and burning of the valve face as well as the seat.

This margin usually is approximately 3/64 in. wide on most valves and after refacing should be at least 75 per cent of what it was originally. The thinner the margin, the wider the face.

Valve Seat Angle

Valve seat angle should be within ½ deg. of that specified by the engine manufacturer. This should not be confused with the interference angle between the valve face and the valve seat specified by some engine manufacturers, i.e., valve face 46½ deg., valve seat 45 deg., interference of 1½ deg. Where valve burning has been encountered, the use of interference angle has sometimes alleviated this condition.

Care should be taken when the valve seats are reconditioned to insure that an even seat is ground.



A valve seat which is wide at one point and narrow at another will cause premature burning of the valve due to unevenness of the heat flow and is an indication that the valve seat is not concentric with the valve guide.

Valve Stem Wear and Guide Clearance

Stem Diameter	Clearance Intake	Clearance Exhaust
7/16 in.	.002	.003
11/32 in.	.0025	.0035
5/16 in.	.003	.004
9/32 in.	.0035	.0045
½ in.	.004	.005

If wear develops to a point where the clearance is 50 per cent greater than the specified maximum, replacement of the worn parts is recommended. (Wear readings should be taken at maximum bell mouth or taper.)

(Turn to Next Page, Please)

Wear Limit Charts and Data

Continued from Page 71

Valve stem warpage, up to .003 maximum indicator reading, is permissible. Wear on stem tip up to 1/32 in. is usually permissible. If clearance is .003 or less, a stem .003 will bind.

Valve stem wear should not exceed .001 under the original diameter. That portion of the valve stem below the valve lock groove is not a wearing surface and consequently can be used to measure the original diameter of the stem.

Valve Stem Length

This is not too critical a dimension on most designs inasmuch as the tappet can be adjusted to compensate for valve stems which have been ground and thereby shortened. In the case of the Ford valve where adjustable tappets are not used, length should be held to .020 of the original length.

Valve Tappet To Bore Clearance

This clearance should not exceed engine manufacturers' specifications. Soft spots, excessively worn contact faces, worn, cupped and cracked tappet followers and screws should be replaced. Positive setting of valve tappet clearance is impossible with badly worn tappets.

Valve Stem To Guide Clearance

An old rule to follow is .00035 per .100 valve stem diameter, i.e., a valve stem having a .341 diameter should be fitted with approximately .0012 clearance. This would be the low limit and should not exceed .0022.

Excessive clearance interferes with the heat transfer from the valve stem to the guide and allows varnish and deposits to stem and build up on the valve stem until it is held open and burned.

Exhaust valve guide clearance should be approximately .0005 greater than intake.

Valve Guide Taper

Valve guide tapers fall into the same category as the guide clearance and should not exceed .001 due to taper or uniform wear. Where design specifies a taper for the I.D. of the guide, we would suggest that the above limits of wear be considered as the limiting factor.

The above wear limits and operating tolerances will be satisfactory regardless of the type of alloy used in their composition. Tappet clearance is the only adjustment necessary when an austenitic steel valve is used to replace the original equipment valve of magnetic steel. The coefficient of expansion of the austenitic steel is considerably greater than magnetic steel and additional clearance is necessary. A corrected clearance chart has been issued specifying the correct tappet clearance for Aerotype valves.

Valve Springs

Valve springs are another determining factor in the condition of the valve. Weak springs permit the valves to bounce on the seat and wear and pound in the face.

All valve springs should be tested on a spring tension tester. The compression should be within 10 per cent of the factory limits. If otherwise, replace.

In replacing valve springs, the closed coils should be kept next to the block so that the surge and pounding due to inertia forces can be reduced. This assists in preventing spring breakage.

Also watch for:

1. Wear in block.
2. Wear in spring retainer cam.
3. Wear in spring end.
4. Spring tension.
5. Lowering of spring tension due to lowering of valve seat on reconditioning.

Installations, where the valves have been lowered on the seat due to grind in the installed spring height, should be checked.

Variations in excess of .020 should be taken up with washers to keep spring pressures in the proper range.

When springs are removed, it is good practice to thoroughly clean them and examine the wire surface. Any signs of corrosion would indicate that they should be discarded.

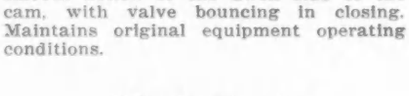
Tappet Clearance

The tappet clearance must not be overlooked. If too much clearance is allowed, the ramp on the cam is not used and the valve train will be subjected to terrific impact forces, causing excessive loads throughout. There will be valve flutter at the cam tip, followed by comparatively smooth action of the dwell side of the cam, with valve bouncing in closing. Maintains original equipment operating conditions.

Valve Seat Inserts

For best performance, the recess for valve seat inserts should be bored smooth square and flat on the bottom.

The sizes should be measured accurately to give the interference fits as shown here.



SERVICE BRAKES

The following working limits for better operation and care of Lockheed, Huck, Bendix and Two-shoe cam operated brakes, are recommended:

Do not cut drum wall on cars, light trucks, heavy trucks and buses more than 20-25 per cent of manufacturer's original thickness. When drums are heavily loaded, caution should be used in cutting down drum thickness due to squeal and distortion problems. Thickness refers to drum body only and does not include flanges or ribs. Drums should be discarded if deflection in diameter is more than .030 in. under full brake application. Diameter should be concentric with hub within .010 in.

SURFACE—Refinish if heat checked or scored more than .010 in. deep.

TAPER—Refinish if barrel shaped or bell-mouthed more than .010 in.

SHIM STOCK or oversize lining should be used to compensate for material removed.

ANCHOR ENDS—Bendix shoes should be repaired or replaced if anchor radius is enlarged or bent.

RIM—Shoes should be repaired or replaced if rim is out of round, out of square or distorted.

WEB—Shoes should be repaired or replaced if rim to web weld is broken as this causes excessive rim flexing resulting in uneven lining wear.

ROLLERS—Discard rollers that are worn, particularly if a flat spot is present on outside. Discard cam follower plates if grooved by the cam more than .015 in.

ANCHOR BUSHINGS should be replaced if worn more than .008 in. Anchors should be fitted and bushings accurately reamed.

PINS: Anchor pin on the Huck brake is non-adjustable type, renew anchor if worn more than .008 in. On the two-shoe cam operated brake and the Lockheed brake, renew anchor pins, or rebush shoes if worn more than .008 in.

ARTICULATING LINKS must be rigid and hold the shoes without side play. Examine buttons and button springs and renew if bent or worn. Applies to Huck brake only.

All weak pull back springs should be replaced.

On the two-shoe cam operated brake, camshaft should be renewed and bracket rebushed if worn more than .025 in.

Repair or replace warped, bent or loose backing plate. Lubricate backing plate ledges.

WHEEL CYLINDERS—Dismantle and examine at each reline or if leaks are present. Renew pistons if scored, sticking or worn more than .005 in. Cylinder walls should be honed if scored. If, after honing enough to remove all scores, the "no-go gauge" will enter, wheel cylinder should be replaced. Renew all rubber cups.

CHECK VALVE—Residual line pressure should be 7 to 12 lbs. per sq. in. Renew check valve if spring is rusty or seats are worn in spring type, or if rubber cup or rubber seat are worn or distorted in metal cage type.

PRIMARY AND SECONDARY CUPS—Replace cups if distorted or edges are rounded.

MAIN SPRING—Replace spring if weak or rusty.

PISTON—Renew if scored or worn more than .005.

Make sure ports and filler cup vents are open.

CYLINDER WALLS should be honed if scored. If, after honing enough to remove all scores, the "no-go gauge" will enter, master cylinder should be replaced.

LINING should be replaced when worn within .010 in. of rivet head on passenger cars and light trucks and within 1/32 in. of bolt head on heavy trucks and buses. In the case of bonded linings, which are rapidly coming into the picture, lining should be replaced when worn to a minimum of .020 in. See suggestion from Raybestos.

Recommended Press Fits

O.D. of Seat Insert	Depth of Insert ¼—⅜ Max.	¼—⅜ Min.	¼—⅜ Desired	Depth of Insert ⅜—½ Max.	⅜—½ Min.	⅜—½ Desired	Depth of Insert ⅝—1¼ Max.	⅝—1¼ Min.	⅝—1¼ Desired
1 in.—2 in.	.004	.002	.003						
2 in.—3 in.				.005	.003	.004			
3 in.—4 in.							.006	.004	.005

Engine Troubleshooting

Here is a comprehensive guide to common causes of engine failure. Symptoms are used as a basis for diagnosing impending breakdowns

Starting Trouble

1. Starter won't turn engine:

a. If lights stay bright, check for—
- Open circuit at starter
- Stuck solenoid
- Defective starter switch
- Improperly seating brushes
- Broken starter drive

b. If lights dim slightly, check for—
- Jammed starter drive
- Dirty commutator
- Resistance at starter switch

c. If lights go out, check for—
- Discharged battery
- Loose battery cable
- Corroded terminals
- Defective cell
- Tight engine bearings

2. Starter turns; engine won't start:

a. If ammeter is dead, there is an open circuit in the primary. Check
- Points set too wide
- Corroded points
- Defective ignition switch
- Defective distributor drive
- Loose wire at distributor
- Open winding in coil
- Defective ammeter

b. If ammeter shows steady discharge, there is a grounded primary. Check for—
- Defective insulation, primary wires
- Points set too close
- Worn distributor cam lobes
- Worn rubbing block on points
- Grounded contact point arm
- Shorted condenser
- Shorted primary winding in coil

c. If ammeter reading is normal, but spark does not reach plugs, check
- Wet high tension wires
- Defective distributor cap
- Defective rotor brush or contact
- Grounded wire, coil to distributor
- Corroded wells in distributor cap
- Defective coil or condenser

3. Spark is ok, but engine won't start:

a. If there is no fuel at carburetor, check for—
- Empty gas tank
- Clogged fuel line
- Clogged fuel filter
- Restricted vent in gas tank
- Defective fuel pump
- Air leak in line from tank
- Clogged carburetor screen

b. If there is fuel at carburetor, check
- Flooding at carburetor
- Choke not operating
- Water in gasoline
- Restricted carburetor jets

c. If fuel does not reach carburetor, check for—
- Poor engine compression
- Leaking intake manifold
- Loose carburetor flange
- Broken manifold heat control valve
- Restricted low speed circuit
- Valves out of time

d. If there is flooding at carburetor, check for—
- Choke out of adjustment
- Clogged air strainer
- High float level
- Excessive fuel pump pressure

4. Fuel and spark is ok—check for:
- Defective spark plugs
- Spark plug gap set too wide
- Improper spark timing
- Water in cylinders
- Poor fuel

Rough Operation

1. Engine misfires at idle:

a. Trouble may be in ignition. Check
- Plug gaps set too wide
- Defective spark plugs
- Spark plugs of incorrect heat range
- Sticking breaker arm
- Incorrect breaker point gap
- Loose wire in primary circuit
- Defective distributor rotor
- Corroded, pitted breaker points
- Cracked distributor cap
- Leaking or wet high tension wires
- Worn cam lobes on distributor shaft
- Worn distributor shaft bushings
- Defective coil or condenser
- Defective ignition switch
- Spark Timing out of adjustment

b. Trouble may be carburetion. Check
- Dirt or water in fuel
- Incorrect fuel level
- Leaking intake manifold
- Burned heat riser tube

2. Engine misfires at high speeds:

a. Check for conditions under No. 1

b. Check spark for—
- Weak breaker arm spring
- Breaker points set too wide
- Spark plug gap set too wide
- Defective spark advance
- Wrong type spark plugs
- Weak valve springs
- Excessive carbon in head
- Poor compression
- Low pressure point pressure or volume
- Dirty carburetor

3. Engine backfires:

a. Through exhaust, check for—
- Cracked spark plug porcelain
- Crossed spark plug wires
- Air leaks at manifold
- Weak valve springs

b. Through carburetor, check for—
- Poor quality fuel
- Excessive lean or too rich mixture
- Intake manifold air leaks
- Sticking distributor governor
- Improper ignition timing
- Engine preignition
- Incorrect valve timing
- Improperly seating valves.

4. There is preignition:

a. Check for ignition causes—
- Spark set too fast
- Incorrect type spark plugs
- Burned spark plug electrodes
- Faulty distributor advance

b. Check for fuel causes—
- Poor grade of fuel
- Lean carburetor mixture
- Inoperative heat control valve

c. Check for overheated valves from—
- Insufficient valve tappet clearance
- Incorrect valve seat width
- Thin edged valves
- Too strong valve springs
- Incorrect type of valve

d. Check for other causes, such as—
- Excessive engine temperature
- Carbon deposits in combustion chamber
- Sharp edges in combustion chamber
- Cylinder head projection into chamber

Engine Noises

1. Knocking at the crankshaft:
- Insufficient oil supply
- Low oil pressure
- Diluted oil—water or gasoline
- Loose flywheel
- Excessive bearing clearance
- Excessive end play
- Out-of-round bearing journals
- Misaligned crankshaft
- Broken crankshaft web
- Distorted crankcase

(TURN TO NEXT PAGE, PLEASE)

Engine Troubleshooting

(Continued from Page 73)

2. Knocking at the con-rods, check for:
- Insufficient oil supply
- Low oil pressure
- Excessive bearing clearance
- Misaligned con-rod caps
- Misaligned con-rods
- Tapered, out-of-round journals

3. Piston noises, check for:
- Excessive piston to cylinder bore clearance
- Eccentric or tapered cylinders
- Insufficient piston pin clearance
- Piston hitting cylinder ridge
- Carbon in top of cylinder
- Piston hitting cylinder heat gasket
- Excessive clearance at ring groove
- Pin hole out of round with piston
- Ring lands not properly relieved

4. Piston pin noise, check for:
- Excessive piston pin clearance
- Insufficient piston pin clearance
- Loose piston pin lock
- Con rod end rubbing piston pin boss

5. Noise at oil pump or distributor shaft, check for:
- Oil pump loose on mountings
- Damaged or scuffed oil pump gears
- End play in distributor shaft drive
- Worn shaft bushings
- Couplings loose on shaft
- Worn oil pump and distributor driven gear
- Worn or damaged camshaft drive gear
- Improper mesh of drive and driven gears

6. Noise in water pump, check for:
- Lack of lubrication (lubricated types)
- Worn shaft bearings
- Pulley loose on shaft
- Pump impeller loose on shaft
- Excessive end play of pump shaft
- Impeller blades rubbing pump housing
- Impeller broken or pin sheared

7. Noise at the engine fan, check for:
- Belt adjustment too tight or too loose
- Grease or rust on pulleys
- Worn or burned fan belt
- Incorrect type or size fan belt
- Misaligned pulley
- Excessive fan shaft end play
- Fan blades loose on spider of hub
- Fan blades striking radiator
- Unbalanced fan assembly
- Uneven pitch of fan blades
- Bent, distorted fan blades

8. Noise in fuel pump, check for:
- Fuel pump body loose on engine
- Scored lever or cam eccentric
- Interference of lever with crankcase surface
- Worn rocker arm or rocker arm spring
- Weak or worn rocker arm contact spring

Compression Losses

1. Check for compression failures:

a. Engine performance shows up in—
- Loss of power
- Oil pumping—blow-by
- Smoking exhaust
- High oil consumption
- Diluted engine oil
- Poor acceleration

b. Engine sounds indicate—
- Clicking—broken ring or land
- Knocking—piston slap or broken piston
- Hissing at breather—defective intake valve
- Hissing at exhaust—defective exhaust valve
- Regular hiss—blown gasket
- Backfiring through carburetion—valve
- Backfiring on acceleration—valve failure
- Engine miss at all speeds

c. A compression gage shows—
- Low compression reading
- Low reading—two cylinders
- Leak past valves—compressed air test

d. A vacuum gage shows—
- Low vacuum gage reading
- Fluttering of needle
- Irregular drop in vacuum

2. Check piston ring conditions:

a. If rings are broken, cause may be—
- Wrong type, size ring
- Ring striking top ridge
- Worn ring grooves
- Broken ring lands
- Insufficient ring tension
- Insufficient gap clearance
- Excessive side clearance in ring groove
- Undersize pistons
- Scored, wavy cylinder walls
- Overheating

b. If there is ring sticking, check
- Compression blow-by
- Incomplete combustion
- Engine detonation
- Inadequate crankcase ventilation
- Improper engine cooling
- Insufficient ring land side clearance
- Dirty, contaminated oil
- incorrect type of oil
- Poor grade of oil or fuel
- Lugging engine
- Excessive engine idle

c. If rings are noisy, check for—
- Broken piston ring
- Worn ring grooves
- Broken ring lands
- Lack of inner ring tension
- Top ring striking cylinder ridge
- Undersize pistons
- Wavy cylinder walls

3. Check for piston failures:

a. If there are piston noises, check
- Carbon accumulations in head
- Broken piston, skirt, ring land
- Insufficient clearance at top ring land
- Collapsed piston skirt
- Eccentric or tapered cylinders
- Excessive piston to bore clearance

b. If there is piston breakage, check
- Inadequate lubrication
- Overspeeding and overloading
- Pre-ignition
- Engine overheating
- Misaligned connecting rods
- Undersize pistons
- Eccentric or tapered cylinders
- Warped cylinder barrels

4. Check for cylinder failures:

a. If there is excessive wear, scoring, check for—
- Inadequate lubrication
- Contaminated or poor oil
- Incomplete combustion
- Too harsh type rings
- Improper cylinder finish
- Sharp edge left on piston skirt
- Insufficient ring gap clearance
- Tight piston pins
- Misaligned connecting rods, pins
- Distorted block, crankshaft
- Cylinders bored out of line

b. If there is cylinder warpage, check
- Engine overheating
- Improper head tightening
- Steam pockets in block
- Deposits between dry sleeve and bore
- Improper sleeve installation

5. Check on valve seating for:
- Insufficient valve-tappet clearance
- Broken, weak valve springs
- Improper valve timing
- Deposits under head and stem
- Warped heads and stems
- Cracked valves and seats
- Burned valves and seats
- Warped or binding guides
- Improper grinding operations
- Worn timing gears or chain

Electrical Failures

1. With battery as guide:

a. If frequent charge is necessary, check for—
- Low regulator setting
- Slipping generator drive
- Corroded battery terminals
- Worn out, inefficient battery
- Short circuit in charging circuit
- Stuck cut-out in regulator
- Excessive use of electrical units
- Excessive drag in engine

b. If there is high water loss, check
- Too high charging rate
- Old, inefficient battery
- Leaking battery cell
- Cracked battery case
- Defective current regulation

c. If battery will not take full charge, check for—
- Low water level
- Worn out battery
- Spilled electrolyte
- Internal short circuit
- Impure electrolyte (doped up)

2. With starter as guide:

a. If there is excessive current draw, check for—
- Broken, jammed starter drive
- Dirty, gummed armature
- Shorted armature
- Grounded armature or field
- Resistance in engine parts
- Use of too heavy oil in winter
- Misaligned starting motor
- Worn armature shaft bearings
- Misaligned armature shaft
- Loose field pole pieces

b. If starter fails to operate, check for—
- Poor battery ground
- Jammed drive
- Broken teeth on flywheel
- Direct ground in switch
- Burned contact points in switch
- Improper seating brushes
- High mica between commutator segments
- Shorted armature
- Shorted field or brushes

c. If there is excessive noise at starter, check for—
- Defective starter drive
- Chipped flywheel teeth
- Insufficient lubrication
- Worn armature shaft bearings
- Misaligned starting motor
- Loose starter mounting
- Sprung armature shaft

d. If there are burned commutator bars, check for—
- Excessive arcing at brushes
- Excessive battery voltage
- Improperly seating brushes
- Open circuited armature coils
- Open field circuit

3. With lights as guide:

a. If there is excessive voltage drop, check for—
- Corroded, rusty grounds
- Loose connections
- Cracked, leaking wire insulation
- Frayed, broken cable strands
- Insufficient capacity wiring

b. If lamp fail to light, check for—
- Blown fuse
- Burned out bulbs
- Loose connections
- Open circuit in wiring
- Run down battery
- Defense light switch

c. If lights flicker, check for—
- Loose connections
- Poor grounds at lamps

d. If bulbs burn out, check for—
- Excessive battery voltage
- Corroded, defective grounds
- Excessive charging rate
- Short in wiring
- Incorrect type of bulbs
- Poor grade of bulbs

4. With generator as guide:

a. If generator fails to charge, check
- Open charging circuit
- Cut-out points stuck open
- Sticking brushes
- Dirty, gummy commutator
- Burned out commutator
- Grounded wire in charging circuit
- Grounded field coil
- Short circuit in field
- Open coil in cut-out windings

b. If there is a low, unsteady charging rate, check for—
- Conditions listed in (a.)
- Slipping fan belt
- Loose generator pulley
- Improperly seating brushes
- Worn brushes, weak spring tension
- Incorrect type of brushes
- Out of round commutator
- Resistance in charging circuit
- High mica between commutator bars
- Grounded generator field
- Open armature winding
- Loose pole pieces in field circuit
- Defective ammeter

c. If there is an excessive charging rate, check for—
- Improperly set regulator
- Defective regulator
- Overheated battery
- Improper third brush setting
- Shorted field—internal grounded type
- Grounded field—external ground type

d. If generator is noisy, check for—
- Misaligned fan belt or pulley
- Improperly seated brushes
- Worn or damaged bearings
- Insufficient bearing lubrication
- Loose generator drive pulley
- Loose field pole pieces
- High armature slot wedges
- Excessive output

e. If there is arcing and noise at brushes, check for—
- High mica between commutator bars
- High commutator bars
- Out-of-round commutator
- Sprung armature shaft
- Dirty, glazed commutator
- Hard spots in brushes
- Weak brush spring tension
- Brushes worn down or loose
- Loose wiring at pigtails
- Shunts loose in brushes
- Excessive output

f. If armature fails prematurely, check for—
- Excessive charging rate
- Failure of voltage regulator
- Improper type brushes
- Worn shaft bearings

5. With regulator as guide:

a. If there is excessive oxidation of points, check for—
- Reversed polarity
- Poor ground connections
- Misaligned contact points
- Improper air-gap setting
- Shorted field in generator
- Wrong type of replacement points
- Open shunt resistors

b. If there is excessive point pitting, check for—
- Long usage with normal wear
- High current output of generator
- Insufficient point spring tension
- Reverse polarity in generator—
- Pitting cut-out points
- Suppression condenser on "F" terminal
- Items under TA

c. If there are burned coil windings check for—
- Excessive current output
- Stuck cut-out points
- Short in charging circuit
- Resistance in ground circuit

d. If there are sticking contact points, check for—
- Misaligned points
- Poor ground connection between generator and regulator
- Shorted field coil in generator
- Pitted or oxidized points
- Defective winding in regulator
- Open resistance unit

6. With ignition system as guide:

a. If there is breaker point oxidation, check for—
- High battery voltage
- Oil and crankcase vapors
- Filings lodged on points
- High resistance in condenser circuit
- Incorrect type ignition coil

b. If there is ignition coil failure, check for—
- Extremely high voltage
- Moisture formation
- Excessive heat from engine

c. If there are condenser failures, check for—
- Normal fatigue
- Excessive heat
- Moisture

d. If spark plugs burn and foul, check for—
- Incorrect type plug
- Too rich fuel mixture
- Engine pumping oil
- Inferior grade of gasoline
- Overheated engine

High Oil Consumption

1. Check for external leakage at:
- Outside oil lines

(TURN TO NEXT PAGE, PLEASE)

Engine Troubleshooting

(Continued from Page 75)

Front main bearing
Rear main bearing
Oil pan gaskets
Crankcase ventilator pipe
Fuel pump gaskets
Valve cover gaskets
Timing gear cover gasket
Crankcase drain plug
Oil filter gaskets
Oil filter connections

2. Check for defective rings due to:

Worn or broken rings
Insufficient tension in rings
Insufficient clearance of ring gap
Ring fitted too tight in grooves
Carbon in oil ring slots
Insufficient ventilation of oil rings
Rings out of round, warped, twisted
Wrong size rings

3. Check for defective cylinder surface showing up in:

Worn, wavy, distorted cylinders
Rough finish in cylinders
Scored cylinder walls

4. Check for defective pistons due to:

Normal wear
Out of round pistons
Collapsed piston skirt
Insufficient drain holes in oil ring grooves
Worn ring grooves
Improperly fitted pistons
Misalignment of piston and rod assemblies

5. Check for defective bearings due to:

Scored con-rod bearings
Worn main bearings
Leaking main bearing seals
Worn camshaft bearings
Spurt holes in worn rods
Plugged oil seal drain
Out-of-round crankshaft
Misaligned bearing caps
Misaligned crankshaft

6. Check for defective valves due to:

Valve timing too late
Incorrect tappet clearance
Leaky or burnt valves
Plugged valve chamber drain
Worn valve seats
Worn valve stems or guides

7. Check condition of oil:

Oil level too high
Thin, diluted oil
Oil pressure too high
Broken oil lines
Poor grade oil

8. Check for other contributing factors:

Clogged breather
Clogged oil filter
Clogged muffler, tail pipe
Leaky intake manifold gaskets
Defective spark plugs
Faulty carburetion
Overheated engine
Defective booster pump diaphragm
Worn timing gears or chain
Sustained high speeds
Improper break-in of newly rerung engine

High Gas Consumption

1. When trouble is in carburetor — check for:

a. Flooding or leaking caused from—
Cracked carburetor casting
Leaking line connections
Defective carburetor bowl gasket
High float level
Plugged vent hole in cover
Loose float needle seat
Defective needle valve seat gasket
Worn needle valve and seat
Foreign matter clogging needle valve
Ridge worn in lip of float
Worm float pin or bracket
Float binding in bracket
High fuel pump pressure

b. An overrich mixture caused from—
Restricted air cleaner
Too much oil in air cleaner
Choke level stuck
Choker valve spring stuck
Leaking float
High float level
Warped or bent bowl cover
Worn metering rod
Worn high speed circuit jets
High fuel pump pressure

c. Too rich choke caused from—
Plugged air strainer
Binding butterfly valve
Choker shaft binding
Stuck or binding choke piston
Leak in choke gasket
Improper adjustment of accelerating pump

2. When trouble is in fuel pump, check for:

Leakage around diaphragm cover
Leaking fuel pump diaphragm
Leaking sediment bowl gasket
Loose valve seats
Warped check valves
Dirt, sediment in valves
Corroded valve seats
High fuel pump pressure

3. When there is fuel loss check for:

Leakage at lines and connections
Leaking gas tank
Evaporation from partially filled tank
Evaporation from overheated lines
Leakage at filler cap

4. When trouble is caused by ignition conditions, check for:

Incorrect spark timing
Leaking high tension wires
Incorrect spark plug gap
Fouled spark plugs
Worn breaker points
Faulty spark advance
Defective condenser
Weak ignition coil
Pre-ignition

5. When trouble is caused by poor compression check for:

Leaking head gasket
Worn or broken piston rings
Worn pistons and cylinders
Worn valve stems or guides
Sticking valves
Poorly seating valves
Weak valve springs
Distorted head or block

6. Check for other vehicle factors such as:

Loose carburetor flange on manifold
Improperly adjusted or worn throttle linkage
Restricted exhaust system
Carbon in manifold
Improperly adjusted manifold heat control
Leaking windshield wiper hose
Leaking intake manifold gasket
Leaking manifold intake heat riser
Overheating engine
Unsatisfactory engine warm-up
Use of poor grade of gasoline

7. When chassis conditions are to blame, check for:

Dragging brakes
Slipping clutch
Under-inflated tires
Excessive engine friction

8. When driving conditions are to blame, check for:

High speeds
Rapid acceleration
Excessive use of low gears
Excessive idling
Improper engine warm up
Use of too heavy lubricants

Valve Failures

1. When valves break, check for:

Excessive tappet clearance
Cocked springs or retainers
Weak valve springs
Too much spring pressure
Excessive temperatures
Excessive engine speeds
Out of round seats
Worn valve guides
Worn retainers
Worn retainer grooves
Block distortion
Defective valve forgings

2. When valves burn, check for:

Close tappet clearance
Lean air-fuel mixture
Improper block cooling

Improper spark plug heat range
Pre-ignition
Improper spark timing
Weak valve springs
Gum formations on stem
Deposits on valve seats
Excessive detonation
Exhaust back-pressure
Improper valve-guide clearance
Warped valves or guides
Incorrect valve seat width
Inferior fuel
Eccentric valve face
Defective valve material

3. When there are valve deposits check for:

Inferior fuel
Inferior oil
Improper cooling
Rich carburetor setting
Dirty oil filters
Dirty air filters
Excessive oil pressure
Poor lubrication of stem
Worn valve stem
Bell-mouthed valve guides
Too much engine idling
Worn rings, cylinders, pistons

4. When valve springs break, check for:

Normal fatigue
Valve flutter at high speed
Corrosion of valve springs
Improper crankcase ventilation
Worn camshaft bearings
Worn crankshaft or bearings
Worn timing gears or chains
Worn lobes on camshaft

5. When valves are noisy, check for:

Excessive tappet clearance
Inadequate lubrication of rocker arms
Wear in tappets, adjusting screw
Wear in cam lobes
Wear in push rods
Wear in rocker arm assembly
Wear in valve guides

6. When precision adjustments are impossible, check for:

Wear in valve stem tip
Wear in adjusting tappet screw
Wear in push rod ends
Loose rocker arm assemblies
Worn rocker arms
Wear in tappet body
Wear in spring retainer slot
Wear in spring retainer cup

Bearing Failures

1. Check for premature wear:

Caused by dirt from—
Careless service methods
Contaminated oil
Infrequent oil changes
Dirty oil filters
Dusty operation

2. Caused by improper fitting due to:

Distorted con-rods
Mixing con-rod caps
Installing shells backwards
Filing shell to fit
Chiseling shell to reduce clearance
Dirt between brg. and rod bore
Out-of-round journals
Tapered journals
Warped crankshaft or block
Excessive crankshaft end play
Scored bearing surface
Improper clearance
Use of inaccurate tools
Improper tensions of studs

3. Caused by corrosion from:

Crankcase acid vapors
Infrequent oil changes
Poor crankcase ventilation
Incomplete combustion
Engine blow-by
Inferior type of oil
Overcooling
Overheating

4. Caused by improper vehicle operation such as:

Overspeeding
Overloading
Lugging on hills
Spark detonation
Improper engine break-in
Racing a cold engine
Use of wrong type, grade oil
Use of improper fuel
Improper spark timing

5. Caused by lubrication failures resulting from:

Defective oil pump
Clogged oil pump screen
Excessive engine sludge
Excessive engine temperature
Use of too heavy oil in winter
Insufficient engine warm up
Insufficient quantity of oil
Crankcase dilution
Inadequate crankcase ventilation

Cooling System Troubles

1. When there is external leakage, check for:

Loose, defective hose clamps
Defective rubber hose
Broken radiator seams
Corrosion perforation of water tubes
Loose core hole plugs
Worn water pump shaft, seal, bearing
Damaged gaskets, pump, cylinder
Warped cylinder head or block
Cracked cylinder head or block

2. When there is internal leakage, check for:

Loose cylinder head bolts
Damaged cylinder head gasket
Warped cylinder head or block
Cracked cylinder wall
Porosity of cylinder head (aluminum)
Deteriorated wet cylinder sleeve seals
Broken joints in oil coolers

3. When there is loss from overflow, check for:

Defective pressure valve in cap
Leakage of overflow tank
Defective radiator baffle plate
Air leak on suction side of pump
Air entrainment from top tank turbulence
Restricted passages in radiator
Steam formation at hot spots
Foaming of cooling liquid
Exhaust gas leakage into system

4. When there is restricted circulation, check for:

Slipping fan belt
Low or too high coolant level
Clogged radiator core
Collapsed radiator hose
Stuck thermostat
Pump impeller loose on shaft
Pump blades broken or worn
Clogged water jacket passages
Distribution tube dislocated
Air leak in suction side of system
Inadequate cooling system capacity

5. When engine overheats, check for:

a. Cooling system factors caused by:
Causes listed in No. 4
Clogged bug screen
Coated radiator core fins
Radiator air baffles out of place
Bent fan blades
Oil and sludge in system

b. Spark conditions caused by:
Incorrect ignition timing
Improper fuel mixture
Low oil level
Defective spark advance mechanism
Incorrect valve timing
Pre-ignition
Clogged exhaust or muffler
Defective heat control valve
Tight engine, bearings, pistons, rods

c. Operating factors caused by:
Dragging brakes
Overloading of vehicle
Lugging engine on grades
Excessive engine idling
High sustained speeds
Driving in sand, snow, mud
Stop and go driving

6. When there is overcooling, check for:

Defective thermostat
Thermostat installed incorrectly
Automatic shutters not functioning
Defective heat control valve
Inaccurate temperature indicator
Excessive engine idling

7. When there is corrosion present, check for:

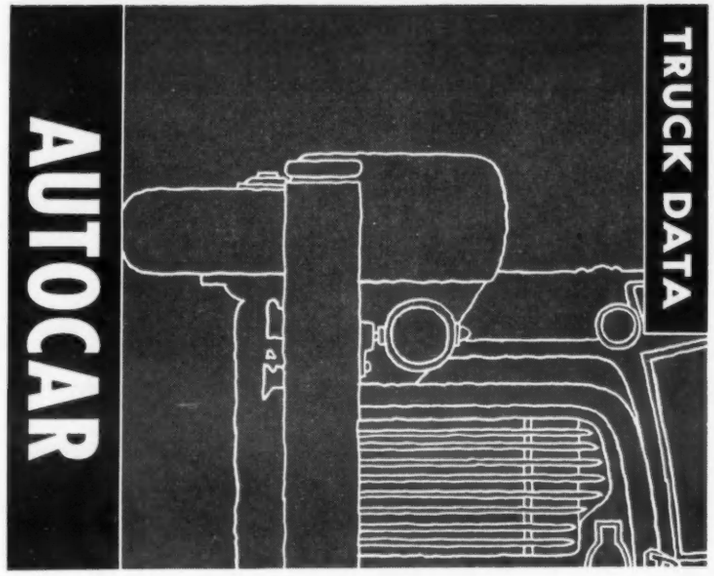
Impurities in water
Lack of rust inhibitor
Improper draining and service
Air leaks in system
Electrolytic action
High temperature

See Special Diesel Engine Troubleshooting Data on Page 228

• AUTOCAR

BATTERY — FRONT END — CAPACITIES

TRUCK / STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	Toe-In (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	Lubricant: Engine (Quarts)	Lubricant: Transmission (Pints)	Lubricant: Rear Axle (Pints)	Cooling System (Quarts)
C-65T, C-65 ..... Own 501	120a	17	Pos	2	2	0–¼	1P	½N–½P	5½P	16	14	25	34
CL-65T, CL-65 ..... Le Roi T-H540	120a	17	Pos	2	2	0–¼	1P	½N–½P	5½P	10	14	25	47
C-65D ..... Own 501	120a	17	Pos	2	2	0–¼	1P	½N–½P	5½P	16	14	18	34
CL-65D ..... Le Roi T-H540	120a	17	Pos	2	2	0–¼	1P	½N–½P	5½P	10	14	18	47
C-6564T ..... Own 501	120a	17	Pos	2	2	0–¼	1P	½N–½P	5½P	16	14	20c	34
CL-6564T ..... Le Roi T-H540	120a	17	Pos	2	2	0–¼	1P	½N–½P	5½P	10	14	20c	47
C-6564 ..... Own 501	120a	17	Pos	2	2	0–¼	1P	½N–½P	5½P	16	14	23c	34
CL-6564 ..... Le Roi T-H540	120a	17	Pos	2	2	0–¼	1P	½N–½P	5½P	10	14	23c	47
C-84T, C-85T ..... Own 501	120a	17	Pos	2	2	0–¼	1P	0–1½P	5½P	16	14	18	34
CL-84T, CL-85T ..... Le Roi T-H540	120a	17	Pos	2	2	0–¼	1P	0–1½P	5½P	10	14	18	47
C-85 ..... Own 501	120a	17	Pos	2	2	0–¼	1P	½N–½P	5½P	16	14	18	34
CL-85 ..... Le Roi T-H540	120a	17	Pos	2	2	0–¼	1P	½N–½P	5½P	10	14	18	47
CL-8464 ..... Le Roi T-H540	120a	17	Pos	2	2	0–¼	1P	½N–½P	5½P	10	16d	24c	47
C-90D ..... Own 501	120a	17	Pos	2	2	0–¼	1P	1N–1P	8	16	14d	24	34
CL-10364S ..... Le Roi T-H540	120a	17	Pos	2	2	0–¼	1P	1N–1P	8	10	16d	28c	47
DC-65T ..... Cum JBS	150e	19	Pos	2	2	0–¼	1P	½N–½P	5½P	12	14	25	31
DC-74T, DC-75T ..... Cum HRB	150e	19	Pos	4	4	0–¼	1P	0–1½P	5½P	28	14d	25	37
DC-7564 ..... Cum HRB	150e	19	Pos	4	4	0–¼	1P	½N–½P	5½P	28	14d	23c	37
DC-102, DC-103T ..... Cum HRB	150e	19	Pos	4	4	0–¼	1P	0–2P	8P	28	16d	18	40
DC-102T ..... Cum HRB	150e	19	Pos	4	4	0–¼	1P	0–2P	5½P	28	16d	18	40
DC-103D ..... Cum HRB	150e	19	Pos	4	4	0–¼	1P	1N–1P	8P	28	16d	24	40
DC-10264 ..... Cum HRB	150e	19	Pos	4	4	0–¼	1P	0–2P	5½	28	16d	24c	40
DC-10364S ..... Cum HRB	150e	19	Pos	4	4	0–¼	1P	1N–1P	8	28	16d	28c	40
DCU-75T ..... Cum HRB	150e	19	Pos	4	4	0–¼	1P	1N–1P	8	28	44	25	40



LUBRICATION

TRUCK / STANDARD ENGINE	Engine: Viscosity and Temperature Range			Transmission: Summer	Transmission: Winter	Rear Axle: Summer	Rear Axle: Winter	Steering Gear: Summer	Steering Gear: Winter	Universal Joints
All Models ..... All Models	30 Above 40°	20-40° to 10°	10W Below 10°	140g	90g	140	90	140	90	140–90

TUNE UP — VALVE SPRINGS — TENSIONS

TRUCK / STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Intake Valve Opens B-Before A-After: Flywheel °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted): Intake	Operating Tappet Clearance (Hot unless noted): Exhaust	Spark Plug: Make	Spark Plug: Type	Spark Plug: Size	Spark Plug: Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Valve Open: Average Pressure (Lb.)	Valve Open: Length (In.)	Valve Closed: Average Pressure (Lb.)	Valve Closed: Length (In.)	Tensions: Cylinder Head (Lb.-Ft.)	Tensions: Main Bearings (Lb.-Ft.)	Tensions: Connecting Rod Bearings (Lb.-Ft.)
C-65, C-84, C-85, C-90D Series ..... Own 501	6-4⅛x5¼	40-2400	16B	.....	.055	.013	.021	CH	8 Com	18mm	.030	.021	6B	2B	105	132	2 1/32	69	2 1/32	90–100	140–150	90–100
CL-65, CL-84, CL-85, CL-10364S Series ..... Le Roi T-H540	6-4⅛x4¼	40-2800	TC	.....	.....	.013	.013	CH	J-8	14mm	.030	.016	10B	.....	125	.....	.....	.....	.....	90	95	60
DC-65T ..... Cum JBS-600	6-4½x5	40-2500	41B	.....	.....	.015	.025	.....	.....	.....	.....	.....	.....	.....	550	118	2	72	2 1/32	See Cummins, page 106		
DC-74T, DC-75T, DC-100, DCU-75 Series ..... Cum HRB-600	6-5⅛x6	40-1800	5B	.....	.....	.014	.022	.....	.....	.....	.....	.....	.....	.....	525	135	2 1/32	87	2 1/32	See Cummins, page 106		
DC-10064S ..... Cum NHB-600	6-5⅛x6	40-2100	20B	.....	.....	.014	.027	.....	.....	.....	.....	.....	.....	.....	500	109	1 31/32	78	2 1/4	See Cummins, page 106		

P—Positive. N—Negative. a—Two batteries. b—Torque divider, 20 pts. c—Each axle. d—Auxiliary transmission, 12 pts. e—2 or 4 batteries as required. f—On the 20 ¾-in. cylinder head nuts only. g—Spicer transmission, SAE 50 engine oil.

O.—Outer. I.—Inner. a—When oil filter is drained add one extra qt. b—When oil filter is drained add 4 extra qts. c—2 rear axles. d—2 batteries. e—When 2 speed axle, use 32 pt. f—Exhaust clearance .032 in. for valve timing only. g—Extreme pressure lube. h—On Model No. 260XWL, 8° king pin slant. i—On Model 240XW, 0° king pin slant. j — On Model No. 152W, 20 pt; Model No. 152BB, 31+22 pt, Model No. 153W, 37 pt.

• BROCKWAY

TUNE UP — VALVE SPRINGS — TENSIONS

TRUCK / STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Intake Valve Opens B-Before A-After: Flywheel °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted): Intake	Operating Tappet Clearance (Hot unless noted): Exhaust	Spark Plug: Make	Spark Plug: Type	Spark Plug: Size	Spark Plug: Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Valve Open: Average Pressure (Lb.)	Valve Open: Length (In.)	Valve Closed: Average Pressure (Lb.)	Valve Closed: Length (In.)	Tensions: Cylinder Head (Lb.-Ft.)	Tensions: Main Bearings (Lb.-Ft.)	Tensions: Connecting Rod Bearings (Lb.-Ft.)
120 Series ..... Own 501	6-4⅛x5¼	40-2400	16B	.....	.055	.013	.021	CH	8 Com	18mm	.030	.021	6B	2B	105	132	2 1/32	69	2 1/32	90–100	140–150	90–100
140 Series ..... Le Roi T-H540	6-4⅛x4¼	40-2800	TC	.....	.....	.013	.013	CH	J-8	14mm	.030	.016	10B	.....	125	.....	.....	.....	.....	90	95	60
150 Series ..... Cum JBS-600	6-4½x5	40-2500	41B	.....	.....	.015	.025	.....	.....	.....	.....	.....	.....	.....	550	118	2	72	2 1/32	See Cummins, page 106		
160 Series ..... Cum HRB-600	6-5⅛x6	40-1800	5B	.....	.....	.014	.022	.....	.....	.....	.....	.....	.....	.....	525	135	2 1/32	87	2 1/32	See Cummins, page 106		
180 Series ..... Cum NHB-600	6-5⅛x6	40-2100	20B	.....	.....	.014	.027	.....	.....	.....	.....	.....	.....	.....	500	109	1 31/32	78	2 1/4	See Cummins, page 106		

TRUCK	STANDARD ENGINE																						
Series	Cum HRB-600	6-5½x6	40-1800	5B	.....	.....	.014	.022	.....	.....	.....	.....	.....	.....	525	136	2½	87	2½	See	Cummins,	page 106
DC-10064S	Cum NHB-600	6-5½x6	40-2100	20B	.....	.....	.014	.027	.....	.....	.....	.....	.....	.....	500	109	1⅞	78	2¼	See	Cummins,	page 106

P—Positive. N—Negative. a—Two batteries. b—Torque divider, 20 pts. c—Each axle. d—Auxiliary transmission, 12 pts. e—2 or 4 batteries as required. f—On the 20 ⅛-in. cylinder head nuts only. g—Spicer transmission, SAE 50 engine oil.

O.—Outer. I.—Inner. a—When oil filter is drained add one extra qt. b—When oil filter is drained add 4 extra qts. c—2 rear axles. d—2 batteries. e—When 2 speed axle, use 32 pt. f—Exhaust clearance .032 in. for valve timing only. g—Extreme pressure lube. h—On Model No. 260XWL, 8° king pin slant. i—On Model 240XW. (9° king pin slant. j — On Model No. 152W, 20 pt; Model No. 152BB, 31+22 pt, Model No. 153W, 37 pt.

BROCKWAY

TUNE UP

MODEL No. / TRUCK	STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After °TC	Intake Valve Opens B-Before A-After Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted) Intake	Operating Tappet Clearance (Hot unless noted) Exhaust	Spark Plug Make	Spark Plug Type	Spark Plug Size	Spark Plug Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed
88WH (1945-52)	Con 38B	6-3¾x4⅜	60-2000	6½B	2¼B	.022	.020	.022	CH	7Com	18mm	.025	.022	6B	.....	.....
88WH (1953)	Con 38B	6-3¾x4⅜	60-2000	6½B	.....	.022	.020	.022	CH	8Com	18mm	.025	.022	9B	.....	.....
128W, 146W (1945-52)	Con 40B	6-4x4⅜	60-2000	6½B	2¼B	.022	.020	.022	CH	7Com	18mm	.025	.022	6B	.....	.....
128W, 146W (1953)	Con 40B	6-4x4⅜	60-2000	6½B	.....	.022	.020	.022	CH	8Com	18mm	.025	.022	9B	.....	.....
148W, 151W, 152W, 153W, 154W (1944-52)	Con 42BX	6-4⅛x4⅜	55-2500	16B	8B	.022	.020	.022	CH	7Com	18mm	.025	.022	6B	.....	.....
148W, 148BB, 151W, 152W, 152BB, 153W, 153BB, 154W (1953)	Con 42BX	6-4⅛x4⅜	55-2500	16B	.....	.022	.020	.022	AL	BT-8	18mm	.025	.022	10B	.....	.....
154WH, 240XW, 260XL (1947-52)	Con 46B	6-4½x5⅜	55-2500	19B	6½B	.022f	.020	.024	CH	5Com	18mm	.025	.022	10B	.....	.....
154WH, 154WHS, 240XW, 260XL, 260XLBB (1953)	Con 46B	6-4½x5⅜	55-2500	19B	.....	.022f	.020	.024	CH	5Com	18mm	.025	.022	10B	.....	.....
260XW, 260XWL (1947-52)	Con 48B	6-4¾x5⅜	55-2500	19B	6½B	.022f	.020	.024	CH	5Com	18mm	.025	.022	5B	.....	.....
154WHL, 260XW, 260XWL (1953)	Con 48B	6-4¾x5⅜	55-2500	19B	.....	.022f	.020	.024	CH	5Com	18mm	.025	.022	5B	.....	.....

VALVE SPRINGS

TRUCK	STANDARD ENGINE	Valve Open Average Pressure (Lb.)	Valve Open Length (In.)	Valve Closed Average Pressure (Lb.)	Valve Closed Length (In.)
88WH (1945-52)	Con 38B	119@4	1.52	61@3	1⅞
88WH (1953)	Con 38B	119@4	1.52	61@3	1⅞
128W, 146W (1945-52)	Con 40B	119@4	1.52	61@3	1⅞
128W, 146W (1953)	Con 40B	119@4	1.52	61@3	1⅞
148W, 151W, 152W, 153W, 154W (1944-52)	Con 42BX	144@7	1.316	69@3.5	1.617
148W, 148BB, 151W, 152W, 152BB, 153W, 153BB, 154W (1953)	Con 42BX	144@7	1.316	69@3.5	1.617
154WH, 240XW, 260XL (1947-52)	Con 46B	(O.160@7	1.617	67@4	2.117
		I. 90@4	1.367	38@3	1.867
154WH, 154WHS, 240XW, 260XL, 260XLBB (1953)	Con 46B	(O.160@7	1.617	67@4	2.117
		I. 90@4	1.367	38@3	1.867
260XW, 260XWL (1947-52)	Con 48B	(O.160@7	1.617	67@4	2.117
		I. 90@4	1.367	38@3	1.867
154WHL, 260XW, 260XWL (1953)	Con 48B	(O.160@7	1.617	67@4	2.117
		I. 90@4	1.367	38@3	1.867

TENSIONS

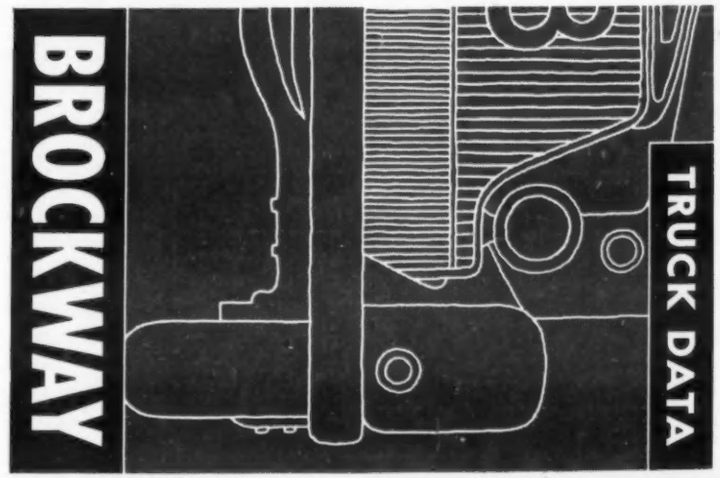
TRUCK	STANDARD ENGINE	Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
88WH (1945-52)	Con 38B	See Continental, page 106		
88WH (1953)	Con 38B			
128W, 146W (1945-52)	Con 40B			
128W, 146W (1953)	Con 40B			
148W, 151W, 152W, 153W, 154W (1944-52)	Con 42BX			
148W, 148BB, 151W, 152W, 152BB, 153W, 153BB, 154W (1953)	Con 42BX			
154WH, 240XW, 260XL (1947-52)	Con 46B			
154WH, 154WHS, 240XW, 260XL, 260XLBB (1953)	Con 46B			
260XW, 260XWL (1947-52)	Con 48B			
154WHL, 260XW, 260XWL (1953)	Con 48B			

LUBRICATION

MODEL No. / TRUCK	STANDARD ENGINE	Engine Viscosity and Temperature Range		Transmission Summer	Transmission Winter	Rear Axle Summer	Rear Axle Winter	Steering Gear Summer	Steering Gear Winter	Universal Joints
88WH to 154W, inclusive	Con 38B, 40B, 42BX	40 above 32°	30 below 32°	90g	90g	90g	90g	140	140	140
154WH to 260XWL, inclusive	Con 46B, 48B	30 above 32°	30 below 32°	90g	90g	90g	90g	140	140	140

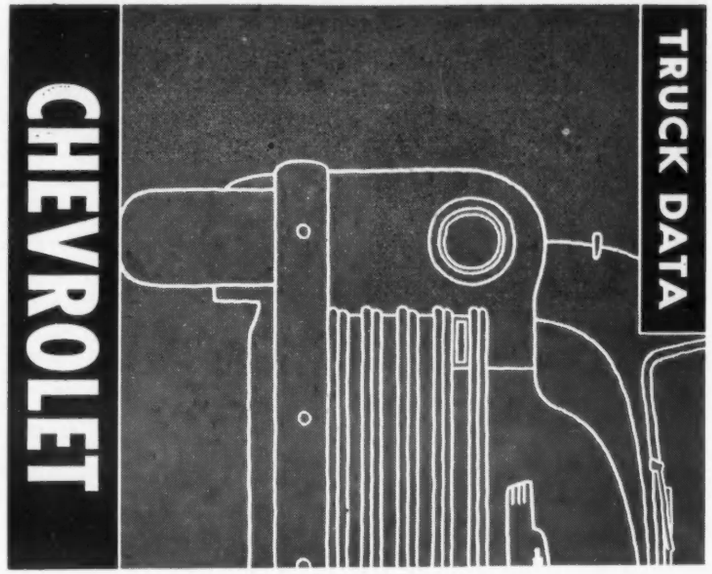
BATTERY — FRONT END — CAPACITIES

MODEL No. / TRUCK	STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	Lubricant Engine (Quarts)	Lubricant Transmission (Pints)	Lubricant Rear Axle (Pints)	Cooling System (Quarts)
88WH	Con 38B	120	17	Pos	2H	2	⅛–⅛	1	½–1½	8	7	7	15	25
128W	Con 40B	120	17	Pos	2H	2	⅛–⅛	1	½–1½	8	7	11	20	25
146W	Con 40B	120	17	Pos	2H	2	⅛–⅛	1	½–1½	5½	7a	11	31	25
148W	Con 42BX	120	17	Pos	2H	2	⅛–⅛	1	½–1½	5½	8a	16	31	30
148BB	Con 42BX	120	17	Pos	2H	2	⅛–⅛	1	½–1½	5½	8a	16	31+22	30
151W, 152W, 152BB, 153W	Con 42BX	120	17	Pos	2H	2	⅛–⅛	1	½–1½	0	8a	16	34j	32
153BB 1950-52	Con 42BX	120	17	Pos	2H	2	⅛–⅛	1	½–1½	0	8a	16	52c	32
153BB (1953)	Con 42BX	120	17	Pos	2H	2	⅛–⅛	1	½–1½	8	8a	16	30+22	32
154W 1950-52	Con 42BX	120	17	Pos	2H	2	⅛–⅛	1	½–1½	5½	8a	16	20	30
154WH, 154WHS, 240XW	Con 46B	150	19	Pos	4H	4	⅛–⅛	1	½–1½	5½i	14b	18	20	40
154WHL	Con 48B	120d	17	Pos	2H	2	⅛–⅛	1	½–1½	5½	14b	18	35	40
260XW, 260XWL	Con 48B	120d	17	Pos	2H	2	⅛–⅛	1	½–1½	0h	14b	18	39e	40
260XL	Con 46B	150	19	Pos	4H	4	⅛–⅛	1	½–1½	8	14b	18	39e	40
260XLBB	Con 46B	120d	17	Pos	2H	2	⅛–⅛	1	½–1½	8	14b	18	30+22	40



• CHEVROLET

MODEL No. / TRUCK	STANDARD ENGINE	BATTERY: Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	FRONT END: Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	CAPACITIES: Lubricant: Engine (Quarts)	Transmission (Pints)	Rear Axle (Pints)	Cooling System (Quarts)
Sedan Delivery, D-54	Own	100	15	Neg	1M	.....	1/16–1/8	0–1	0–1	3½–4½	5*	1½n	3½	16
H-54	Own	100	15	Neg	1M	.....	1/16–1/8	½–1½	1¼–2¼	6½–8½	5	1½o	4½	16
J-54	Own	100	15	Neg	1M	.....	1/16–1/8	½–1½	2–3	6½–8½	5	1½o	6	16q
K-54	Own	100	15	Neg	1M	.....	1/16–1/4	½–1½	2¾–3¾	6½–8½	5	1½o	6	16
L-54, N-54, P-54	Own	100	15	Neg	1M	.....	1/16–1/4	½–1½	2¼–3¼	6½–8½	5	6p	6	17q
M-54	Own	100	15	Neg	1M	.....	1/16–1/4	½–1½	1¾–2¾	6½–8½	5	6p	6	16
R-54 (S. B.)	Own	125	19	Neg	2M	.....	1/16–1/4	½–1½	2¼–3¼	6½–8½	5	6	11	17q
SV, SW, SX-54	Own	100	15	Neg	1M	.....	1/16–1/4	½–1½	2¼–3¼	6½–8½	5	6	12	18r
c.o.e. models	Own	100	15	Neg	1M	.....	1/16–1/4	½–1½	2¼–3½	6½–8½	5	6	12	18r
V-54, W-54, X-54	Own	100	15	Neg	1M	.....	1/16–1/4	½–1½	2¼–3¼	6½–8½	5	6	12	18r
Y-54 S. B., Z-54 S. B.	Own	125	19	Neg	2M	.....	1/16–1/4	½–1½	2¼–3¼	6½–8½	5	6	12	18r



MODEL No. / TRUCK	STANDARD ENGINE	LUBRICATION: Engine: Viscosity and Temperature Range			Transmission: Summer	Transmission: Winter	Rear Axle: Summer	Rear Axle: Winter	Steering Gear: Summer	Steering Gear: Winter	Universal Joints
Sedan Delivery	Own	20 or 20W above 32° 5W below −10°	20W @ 32° to 10°	10W @ 10° to −10°	90e	90e	90h	90h	k	k	m
All other units	Own	20 or 20W above 32° 5W below −10°	20W @ 32° to 10°	10W @ 10° to −10°	90f	90fg	90j	90j	l	l	90f

MODEL No. / TRUCK	STANDARD ENGINE	TUNE UP: Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted): Intake	Exhaust	Spark Plug: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	VALVE SPRINGS: Valve Open: Average Pressure (Lb.)	Length (In.)	Valve Closed: Average Pressure (Lb.)	Length (In.)	TENSIONS: Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
Sedan Delivery, D-54	Own BF 115a	6-3 7/8x3 1/2	45–1170–1200	1A	.....	c	.006	.016	AC	44-5	14mm	.035	d	2A	.....	130	160	1.505	65	1.821	90–95	100–110*	30–45**
H-54, J-54, L-54	Own T Mas.	6-3 7/8x3 1/2	45–1170–1200	1A	.....	c	.006	.016	AC	44-5Com	14mm	.035	d	2A	.....	130	160	1.505	65	1.821	90–95	100–110*	30–45**
K-54, M-54	Own Ld. Mas.	6-3 7/8x3 1/2	45–1170–1200	1A	.....	c	.006	.020	AC	45-5Com	14mm	.035	d	2A	.....	130	160	1.505	65	1.821	90–95	100–110*	30–45**
N-54, P-54, R-54 (S. B.)	Own T. Mas.b	6-3 7/8x3 1/2	45–1170–1200	1A	.....	c	.006	.016	AC	44-5Com	14mm	.035	d	2A	.....	130	160	1.505	65	1.821	90–95	100–110*	30–45**
SV-54 to Z-54 (S. B.) with std.	Own Ld. Mas.	6-3 7/8x3 1/2	45–1170–1200	1A	.....	c	.006	.020	AC	45-5Com	14mm	.035	d	2A	.....	130	160	1.505	65	1.821	90–95	100–110*	30–45**
SV-54 to Z-54 (S. B.) with opt.	Own J. Mas.	6-3 7/8x3 1/2	45–1170–1200	11½B	.....	c	.006	.020	AC	45-5Com	14mm	.035	d	5B	.....	130	182	1.518	65	1.908	90–95	100–110*	30–45**

a—Blue Flame 125 engine optional. b—Load Master available at extra charge. c—Zero lash No. 1 exhaust. d—.015–.021. e—Transmission or mineral oil lube. f—Mineral oil or multi-purpose gear lube. g—May use SAE 80 in long periods of extreme cold. h—Passenger car hypoid or multi-purpose. J—Mineral oil must not be used in hypoid rear axles. k—steering gear or multi-purpose lube. l—Steering gear lube. m—From transmission. n—Powerglide tranamission, 5 qts. refill. o—3-speed heavy-duty, 25/8 pts.; 4-speed, 9 pts.; HydraMatic, 21/2 qts. refill. p—3-speed heavy-duty, 25/8 pts.; HydraMatic, 9½ qts. (Refers only to L-54, M-54.) q—Add 1 qt. with heavy-duty radiator option. r—17 qts. with optional Job Master engine. S B —School bus. •—Refill capacity.

O.—Outer. I.—Inner. a—2 batteries. b—0° camber for 4 wheel drive models. c—5-7° caster for 4 wheel drive models. d—5½° king pin slant for models using FD900 and FE900 front axle. e—4 batteries. f—Each axle. g—With Roto valves set at .018. h—With stellite valves increase .003. i—Center and rear. j—Center and intermediate. k—Advance nuts 60° from snug position. l—Free length. m—Spicer transmissions, SAE-50, winter and summer. n—Model No. G-603, 53½ qt. o—Model No. D-402, 31 pt. p—Model No. D-803V46, 17 pt. q—Model No. D-803V46, 31 pt. each axle; Model No. D-803V60, 32 pt. each axle.

• CORBITT

TUNE UP	VALVE SPRINGS	TENSIONS

a—Blue Flame 125 engine optional. b—Load Master available at extra charge. c—Zero lash No. 1 exhaust. d—.016-.021. e—Transmission or mineral oil lube. f—Mineral oil or multi-purpose gear lube. g—May use SAE 80 in long periods of extreme cold. h—Passenger car hypoid or multi-purpose. j—Mineral oil must not be used in hypoid rear axles. k—steering gear or multi-purpose lube. l—Steering gear lube. m—From transmission. n—Powerglide transmission, 5 qts. refill. p—3-speed heavy-duty, 2¾ pts.; HydraMatic, 9½ qts. (Refers only to L-54, M-54.) q—Add 1 qt. with heavy-duty radiator option. r—17 qts. with optional Job Master engine. S B —School bus. *—Refill capacity.

O.—Outer. I.—Inner. a—2 batteries. b—0° camber for 4 wheel drive models. c—5-7° caster for 4 wheel drive models. d—5½° king pin slant for models using FD900 and FE900 front axle. e—4 batteries. f—Each axle. g—With Roto valves set at .018. h—With stellite valves increase .003. i—Center and rear. j—Center and intermediate. k—Advance nuts 60° from snug position. l—Free length. m—Spicer transmissions, SAE-50, winter and summer. n—Model No. G-603, 53½ qt. o—Model No. D-402, 31 pt. p—Model No. D-803V46, 17 pt. q—Model No. D-803V46, 31 pt. each axle; Model No. D-803V60, 32 pt. each axle.

• CORBITT

TUNE UP

MODEL No.				Intake Valve Opens B-Before A-After			Operating Tappet Clearance (Hot unless noted)		Spark Plug							
TRUCK	STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	°TC	Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Intake	Exhaust	Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed
G-101	Con M-6330	6-4x4⅜	40-50	6½B	......	.022g	.022g	.022gh	AC	84	18mm	.025	.020	6B	......	115
G-302	Con B-6427	6-4 5/16x4⅞	40-50	16B	......	.022	.017	.018h	AC	84	18mm	.025	.020	7B	......	115
G-402, G-452	Con T-6427	6-4 5/16x4⅞	40-60	20B	......	.022	.018	.022	CH	C6	18mm	.025	.020	7B	......	115
G-601	Con R-6513	6-4½x5⅜	50-60	19B	......	.0245	.018	.020h	AC	85	18mm	.025	.020	5B	......	120
G-602	Con R-6572	6-4¾x5⅜	50-60	19B	......	.0245	.018	.020h	AC	85	18mm	.025	.020	5B	......	120
G-603	Con R-6602	6-4⅞x5⅜	50-60	17B	......	.0245	.018	.020h	AC	85	18mm	.025	.020	5B	......	120
D-401	Her DWXD	6-4¼x4¾	40-1600	17½B	......	.010	.016	.016	......	......	......	......	......	......	......	......
D-456, D-406	Wau 135-DKBS	6-4¼x5	......	......	......	......	......	......	......	......	......	......	......	......	......	......
G-803	Wau 145-GKB	6-5¼x8	40-Gov	15B	6B	......	.013	.024	......	......	......	.025	.018	Var	......	......
D-404, D-454	Cum JBS-600	6-4⅛x5	30-50	41B	......	.015	.015	.025	......	......	......	......	......	......	......	......
D-802, D-808	Cum HRB-600, HRBB-600	6-5⅛x6	30-50	5B	......	.014	.014	.022h	......	......	......	......	......	......	......	525
D-803	Cum NHB-600	6-5⅛x6	30-50	20B	......	.014	.014	.027h	......	......	......	......	......	......	......	525

VALVE SPRINGS / TENSIONS

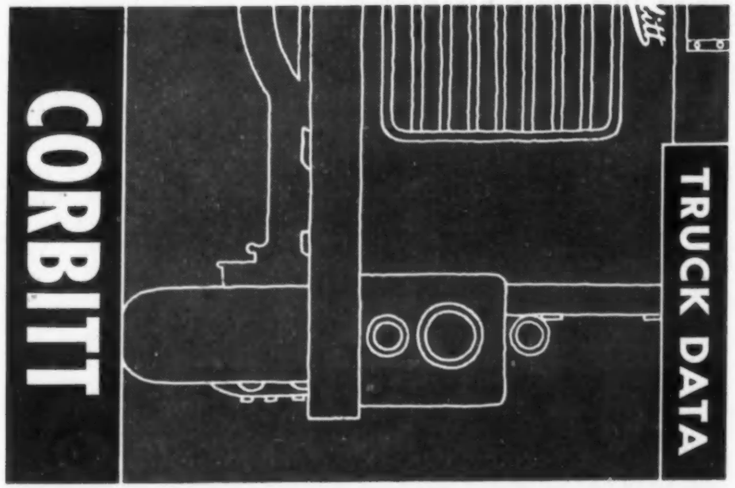
TRUCK	Valve Open: Average Pressure (Lb.)	Valve Open: Length (In.)	Valve Closed: Average Pressure (Lb.)	Valve Closed: Length (In.)	Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
G-101	119	1.521	61	1⅞	5/16" (18)	½" (20)	......
G-302	144	1.316	69	1.617	20-25	85-95	......
G-402, G-452	O. 130	1.110	69	1.548	⅝" (16)	9/16" (18)	......
	I. 61	1.016	29	1.453			
G-601	O. 160	1.617	67	2.117	35-40	100-110	......
	I. 90	1.367	38	1.867			
G-602	173	1¾	78	2¼	7/16" (20)	⅝" (18)	......
G-603	O. 160	1.617	67	2.117	70-75	135-145	......
	I. 90	1.367	38	1.867			
D-401	O. 84	1 37/64	38	1 31/32	158	175	158
	I. 74	1 31/64	28	1⅞			
D-456, D-406	......	......	......	......	......	......	......
G-803	O. 158	2⅜	67	2 11/32	175 Long	267-275	67-69
	I. 100	2 1/16	42	2 21/32	150 Short		
D-404, D-454	169-187	2	84-91	2 13/32	220-240	k	40-45
D-802, D-808	179-198	2 3/16	110-122	2 11/16	430-450	310-330	105-115
D-803	104-114	1 27/32	74-82	2¼	430-450	430-450	105-115

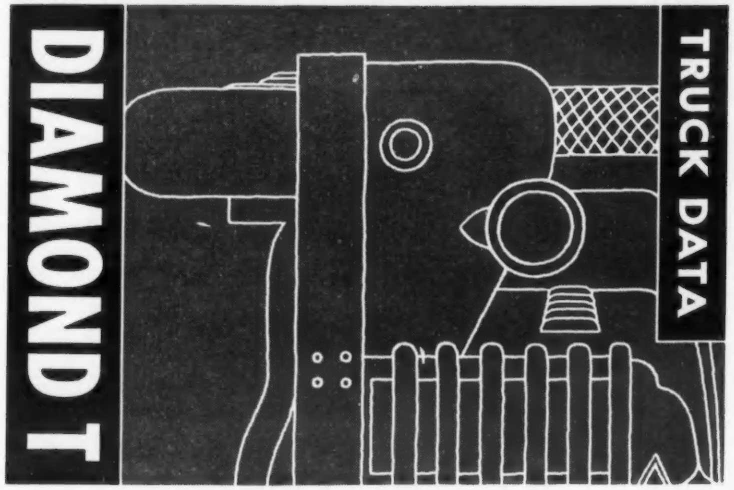
LUBRICATION

MODEL No.		Engine			Transmission		Rear Axle		Steering Gear		
TRUCK	STANDARD ENGINE	Viscosity and Temperature Range			Summer	Winter	Summer	Winter	Summer	Winter	Universal Joints
All gasoline models	Con, Wau	50 above 90°	40 above 32°	30 below 32°	140m	90m	140	90	140	140	140
All diesel models	Her, Cum, Wau	40 above 90°	30 above 32°	20 below 32°	140m	90m	140	90	140	140	140

BATTERY / FRONT END / CAPACITIES

MODEL No.		BATTERY					FRONT END				CAPACITIES			
											Lubricant			
TRUCK	STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	Engine (Quarts)	Transmission (Pints)	Rear Axle (Pints)	Cooling System (Quarts)
G-101	Con M-6330	100a	15	Pos	......	1	⅛-¼	1	2-3½c	8	7	12	20	28
G-302	Con B-6427	140a	21	Pos	......	4	⅛-¼	1	2-3½	8	8	16	31	35
G-402, G-452	Con T-6427	140a	21	Pos	......	4	⅛-¼	1	2-3½	8	8	16	31	35
G-601	Con R-6513	140a	21	Pos	......	4	⅛-¼	1	2-3½	8d	18	24	30	47
G-602	Con R-6572	140a	21	Pos	......	4	⅛-¼	1	2-3½	8d	18	24	30	49
G-603	Con R-6602	140a	21	Pos	......	4	⅛-¼	1	2-3½	8d	18	24	30	53
D-401	Her DWXD	200e	25	Pos	......	7D	⅛-¼	1	2-3½	8	15	16	23	35
D-456, D-406	Wau 135-DKBS	168a	21	Pos	......	5D	⅛-¼	1	2-3½	8d	......	24	31	38
G-803	Wau 145-GKB	140a	21	Pos	......	4	⅛-¼	1	2-3½	8d	18	24	30	53
D-404, D-454	Cum JBS-600	200e	25	Pos	......	7D	⅛-¼	1	2-3½	8d	12	16	31	35
D-802	Cum HRB-600	200e	25	Pos	......	7D	⅛-¼	1	2-3½	8d	28	24	30q	48
D-808	Cum HRBB-600	200e	25	Pos	......	7D	⅛-¼	1	2-3½	8d	28	24	30q	48
D-803	Cum NHB-600	200e	25	Pos	......	7D	⅛-¼	1	2-3½	8d	28	24	30q	48
Front Wheel Drive		......	......	......	......	......	......	0	5-7c	......	......	......	......	......





• DIAMOND T

MODEL No. TRUCK	STANDARD ENGINE	BATTERY Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	FRONT END Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	CAPACITIES Lubricant Engine (Quarts)	Trans-mission (Pints)	Rear Axle (Pints)	Cooling System (Quarts)
323	DT252	100	15	Pos	M	.....	1/8	1	1½	9	6	6	11	25
323C	DT252	100	15	Pos	M	.....	1/8	1	4	9	6	6	11	28
422-522	K6271, K6330	120	17	Pos	2H	.....	1/8	1	1½	9	7	6	20	28
422C-522C	K6271, K6330	120	17	Pos	2H	.....	1/8	1	4	9	7	6	20	32
622	K6363	150	19	Pos	4H	.....	1/8	1	4	8½	7	12	22	32
622C	K6363	150	19	Pos	4H	.....	1/8	1	4	5½	7	12	22	35
660	T6427	150	19	Pos	4H	.....	1/8	1	4	8½	10	18	22	35
720	T6427	168	21	Pos	5H	.....	1/8	1	1½	5½	10	18	22	37
720C	T6427	168	21	Pos	5H	.....	1/8	1	4	5½	10	18	22	32
722	TDXB	168	21	Pos	5H	.....	1/8	1	1½	5½	10	18	30	42
723	JBS	168	21	Pos	5H	.....	1/8	1	1½	5½	18	18	20	34
920	R6572	168	21	Pos	5H	.....	1/8	1	0*	5½	18	15	30	49
921-921B-921F	HB600	168	21	Pos	5H	.....	1/8	1	0*	5½	20	15	30	40
921R-921BR-921FR	HRB600, HRBB600	168	21	Pos	5H	.....	1/8	1	0*	5½	33	44	30	42
921N-921BN-921FN	NHB600	168	21	Pos	5H	.....	1/8	1	0*	5½	33	44	30	48
950-950S-950RS	NHB600, NHBS600, NHRBS600	200	25	Pos	.....	.....	1/8	1	3	0	33	44	30	56

LUBRICATION

MODEL No. TRUCK	STANDARD ENGINE	Engine: Viscosity and Temperature Range			Transmission Summer	Transmission Winter	Rear Axle Summer	Rear Axle Winter	Steering Gear Summer	Steering Gear Winter	Universal Joints
All models	Cum DT252	30 @ 90° 10 below 10°	20 @ 90-30°	10 @ 32-10°	140	90j	k	k	140EP	140EP	140
	K6271, K6330, K6363, T6427, R6572, TDXB, Buda	40 @ 90° 20 below 10°	30 @ 90-30°	20 @ 32-10°	140	90j	k	k	140EP	140EP	140

TUNE UP — VALVE SPRINGS — TENSIONS

MODEL No. TRUCK	STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After °TC	Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted) Intake	Exhaust	Spark Plug Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Valve Open Average Pressure (Lb.)	Length (In.)	Valve Closed Average Pressure (Lb.)	Length (In.)	Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
323-323C	Own DT252	6-3½x4⅜	30-58	12½B	.....	.0225	.012	.016	CH	J7	14mm	.030	.022	4A	.....	.....	.....	.....	.....	.....	65-70	.....	.....
422-422C	Con K6271	6-3⅝x4⅜	40	10B	.....	.022	.017	.022	AL	AT6	14mm	.027	.020	8B	.....	.....	.....	.....	.....	.....	85-90	.....	.....
522-522C	Con K6330	6-4x4⅜	40	10B	.....	.022	.017	.022	AL	AT6	14mm	.027	.020	8B	.....	.....	.....	.....	.....	.....	85-90	.....	.....
622-622C	Con K6363	6-4x4 11/16	40	10B	.....	.022	.017	.022	AL	AT6	14mm	.027	.020	5B	.....	.....	.....	.....	.....	.....	85-90	.....	.....
660-720-720C	Con T6427	6-4 5/16x4⅞	35-45	14B	.....	.022	.017	.022	CH	6 COM	18mm	.027	.020	10B	.....	.....	.....	.....	.....	.....	130-140	.....	.....
722	Her TDXB	6-4⅜x5¼	25-30	5B	.....	.010	.010	.010	AL	AT8	14mm	.027	.020	2B	.....	.....	.....	.....	.....	.....	100	.....	.....
723	Cum JBS	6-4⅛x5	30-50	.....	.....	.....	.....	Die	sel	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
920	Con R6572	6-4¾x5⅜	20-30	17B	.....	.024	.024	.020	CH	5 COM	18mm	.027	.020	5B	.....	.....	.....	.....	.....	.....	100-110	.....	.....
921-921B-921F	Cum HB600	6-4⅞x6	30-50	.....	.....	.....	.....	Die	sel	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
921R-921BR-921FR	Cum HRB600, HRBB600	6-5⅛x6	30-50	.....	.....	.....	.....	Die	sel	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
921N-921BN-921FN, 950	Cum NHB600	6-5⅛x6	30-50	.....	.....	.....	.....	Die	sel	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
950, 950S, 950RS	Cum NHB, NHBS, NHRBS600	6-5⅛x6	30-50	.....	.....	.....	.....	Die	sel	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

*—0°-½° positive without payload. O—Outer. I—Inner. a—622-28M—11 pt each, power divider—6 pt. b—Applies to Model No. 720 only. c—Applies to Model No. 920 only. d—921R-36M—24 pt each, power divider—3 pt. e—921N-SW456—20 pt each. f—Applies to Model No. 950RS only. g—Center bearing—70-75 lb. h—Free length. I—Push tube side—240 lb. j—Clark, Fuller & Warner. Spicer only—straight mineral oil SAE 50. k—Clark Spiral Bevel—E. P. Gear Oil Summer, SAE 140; Winter SAE 90. Timken Spiral Bevel & S. B. Double Reduction—Gear Oil SAE 140. Eaton 2-speed & Hypoid—M. P. Gear Lube SAE 90. Timken Hypoid, D. R. Hypoid & 2-speed Hypoid—M. P. Gear Lube SAE 140. Timken Worm Drive—Gear Oil SAE 140. Clark Hypoid—Hypoid Gear Oil SAE 90. **Note:** When temperatures are consistently above 100 deg, use an SAE gear oil in Eaton axles and Clark hypoid axles.

a—Below minus 10° use 5W unless truck is used on long hauls or in heavy-duty service. In this case use 10W blended with 10% colorless, refined kerosene. b—Short fibre universal joint grease. c—At No Load. d—.015-.018. e—G6, 1½. f—HS6, 6 pts. **F.C.**—Forward Control. **S.B.**—School Bus chassis. **z.l.**—Zero lash. Compression—(1) 128-143. (2) 130-145. (3) 125-140. (4) 120-135. Valve Springs—O—Outer. (a) Inner pressure, 40-45, inner length 1 7/16. (b) Inner pressure 20-23, inner length 1 7/16.

• DODGE

TUNE UP — VALVE SPRINGS — TENSIONS

a—Below minus 10° use 5W unless truck is used on long hauls or in heavy-duty service. In this case use 10W blended with 10% colorless, refined kerosene. b—Short fibre universal joint grease. c—At No Load. d—.015-.018. e—G6, 1½. f—HS6, 6 pts. **F.C.**—Forward Control. **S.B.**—School Bus chassis. **z.l.**—Zero lash. Compression—(1) 128-143. (2) 130-145. (3) 125-140. (4) 120-135. Valve Springs—O—Outer. (a) Inner pressure, 40-45, inner length 1 5/16. (b) Inner pressure 20-23, inner length 1 5/16.

• DODGE

TUNE UP / VALVE SPRINGS / TENSIONS

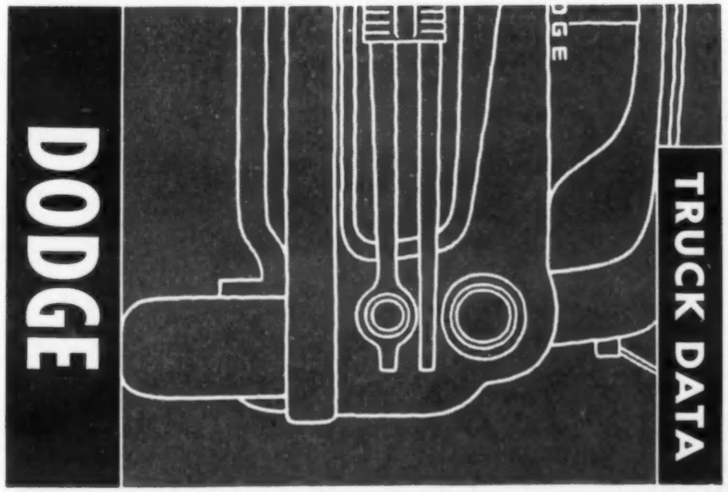
MODEL No. TRUCK	STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After °TC	Intake Valve Opens Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted) Intake	Operating Tappet Clearance Exhaust	Spark Plug Make	Spark Plug Type	Spark Plug Size	Spark Plug Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Valve Open Average Pressure (Lb.)	Valve Open Length (In.)	Valve Closed Average Pressure (Lb.)	Valve Closed Length (In.)	Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
C-1-B6, C6	Own T334, T336	6-3¼x4⅝	40-800	.060B	......	.010	.010	.014	AL	AR	14mm	.035	.020	TDC	......	(1)	1110	1⅝O	42½O	1¾O	65-70	80-85	45-50
C-1-D6, D6-F.C.	Own T338, T362	6-3¼x4⅝	40-800	.0653B	......	.010	.010	.014	AL	AR	14mm	.035	.020	TDC	......	(2)	1110	1⅝O	42½O	1¾O	65-70	80-85	45-50
C-1-DW6, DU6	Own T137, T164	6-3¼x4⅝	40-800	.0653B	......	.010	.010	.014	AL	AR	14mm	.035	.020	2B	......	(2)	1110	1⅝O	42½O	1¾O	65-70	80-85	45-50
C-1-EU6, F6	Own T165, T342	6-3¼x4⅝	40-800	.0653B	......	.010	.010	.014	AL	AR	14mm	.035	.020	2B	......	(2)	1110	1⅝O	42½O	1¾O	65-70	80-85	45-50
C-1-F6-F.C.	Own T364	6-3¼x4⅝	40-800	.0653B	......	.010	.010	.014	AL	AR	14mm	.035	.020	2B	......	(2)	1110	1⅝O	42½O	1¾O	65-70	80-85	45-50
C-1-G6	Own TX342	6-3 7/16x4½	40-800	.0653B	......	.010	.010	.014	AL	AR	14mm	.035	.020	1B	......	(2)	1110	1⅝O	42½O	1¾O	65-70	80-85	45-50
C-1-G8	Own VTX342	8-3 7/16x3¼	40-65	17B	......	z.l.	z.l.	z.l.	AL	AR	14mm	.035	g	4B	......	(3)	105a	1 5/16a	40½b	1 11/16b	65-70	80-85	45-50
C-1-H6, HM6	Own T344, T356	6-3 7/16x4½	40-800	12B	......	.010	.010	.014	AL	AR	14mm	.035	.020	1B	......	(2)	1110	1⅝O	42½O		65-70	80-85	45-50
C-1-H8	Own VT344	8-3 7/16x3¼	40-65	17B	......	z.l.	z.l.	z.l.	AL	AR	14mm	.035	d	4B	......	(3)	105a	1 5/16a	40½b		65-70	80-85	45-50
C-1-J6, JM6	Own T346, T358	6-3 7/16x4.76	40-800	12B	......	.010	.010	.018	AL	AR	14mm	.035	.020	1B	......	(2)	1110	1⅝O	42½O		65-70	80-85	45-50
C-1-J8, K8	Own VT346, VTX346	8-3 7/16x3¼	40-65	17B	......	z.l.	z.l.	z.l.	AL	AR	14mm	.035	d	4B	......	(3)	126a	1 5/16a	55b	1 11/16b	65-70	80-85	45-50
C-1-K6, KMA6	Own TX346, TX358	6-3 7/16x4.76	40-800	12B	......	.010	.010	.018	AL	AR	14mm	.035	.020	1B	......	(2)	1110	1⅝O	42½O	1¾O	65-70	80-85	45-50
C-1-R8	Own VT346, VT350, VTX350	8-3 13/16x3⅝	40-65	15B	......	z.l.	z.l.	z.l.	AL	AR	14mm	.035	d	4B	......	(3)	126a	1 5/16a	55b	1 11/16b	65-70	80-65	45-50
C-1-Y6, YX6	Own T352, TX353	8-4 1/16x5 1/16	40-800	18B	......	z.l.	z.l.	z.l.	AL	AR	14mm	.035	.020	TDC	......	(4)	1250	1 21/32O	70O	2O	55-60h	85-90	50-75

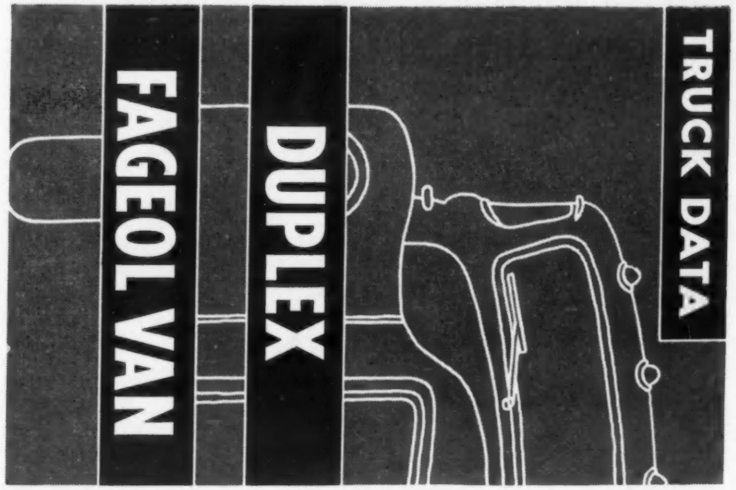
LUBRICATION

MODEL No. TRUCK	STANDARD ENGINE	Engine Viscosity and Temperature Range			Transmission Summer	Transmission Winter	Rear Axle Summer	Rear Axle Winter	Steering Gear Summer	Steering Gear Winter	Universal Joints
All models	All models	30 above 32°	20W @ 10° to 32°	10W below 10° a	90	80	90	80	90	80	b

BATTERY / FRONT END / CAPACITIES

MODEL No. TRUCK	STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	Lubricant Engine (Quarts)	Lubricant Trans-mission (Pints)	Lubricant Rear Axle (Pints)	Cooling System (Quarts)
C-1-B6	Own T-334	100	15	Pos	......	......	0-⅛	1½	3c	4	5	2¾	3¾	15
C-1-C6	Own T-336	100	15	Pos	......	......	0-⅛	1½	2¼	4	5	3½	3¾	15
C-1-D6, D6 (F.C.)	Own T-338, T-362	100	15	Pos	......	......	0-⅛	1½	2½	4	5	3½	5½	15½
C-1-PW6	Own T-137	100	15	Pos	......	......	0-⅛	1½	½	8	5	6	6	17
C-1-DU6	Own T-164	100	15	Pos	......	......	0-⅛	1½	1½	4	5	3½	5½	17
C-1-EU6	Own T-165	100	15	Pos	......	......	0-⅛	1½	1½	7	5	6	6	17
C-1-F6-F6 (F.C.)	Own T-342	100	15	Pos	......	......	0-⅛	2	1½	7	5	6	11	15½
C-1-G6, H6	Own TX-342, T-344, VT-344	120	17	Pos	......	......	0-⅛	2	1e	7	5	5½f	11	18
C-1-G8	Own VTX-342	100	15	Pos	......	......	0-⅛	2	1½	7	5	5½	11	21
C-1-HM6, HS6 (S.B.)	Own T-356, TS-344	120	17	Pos	......	......	0-⅛	2	1e	7	5	5½f	11	18
C-1-J6, JM6	Own T-346, T-358	120	17	Pos	......	......	0-⅛	2	1¼	7	5	7	10	20
C-1-J8	Own VT-346	100	15	Pos	......	......	0-⅛	2	1¼	7	5	7	10	23
C-1-K6, KMA6	Own TX-346, TX-358	120	17	Pos	......	......	0-⅛	2	¼	7	5	9⅔	20	20
C-1-K8	Own VTX-346	100	15	Pos	......	......	0-⅛	2	¼	7	5	9⅔	20	23
C-1-R8	Own VT-348	135	19	Pos	......	......	0-⅛	2	2	7	8	9⅔	20	29
C-1-T8	Own VT-350	135	19	Pos	......	......	0-⅛	1	2¾	8	8	9⅔	23	29
C-1-V8	Own VTX-350	135	19	Pos	......	......	0-⅛	1	2½	8½	8	9⅔	31	29
C-1-Y6, YX6	Own T-352, T-353	155	23	Pos	......	......	0-⅛	1	3¼	8½	8	16	31	34
C-1-FS6 (S.B.)	Own TS-342	100	15	Pos	......	......	0-⅛	2	1½	7	5	6	11	15½
C-1-JS6 (S.B.)	Own TS-346	120	17	Pos	......	......	0-⅛	2	1¼	7	5	5½	10	20
C-1-RS8 (S.B.)	Own VTS-348	135	19	Pos	......	......	0-⅛	1	2¾	8	8	9⅔	20	29





DUPLEX

FAGEOL VAN

DUPLEX & FAGEOL VAN

MODEL No. TRUCK	STANDARD ENGINE	BATTERY: Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	FRONT END: Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	CAPACITIES: Engine (Quarts)	Lubricant: Trans-mission (Pints)	Lubricant: Rear Axle (Pints)	Cooling System (Quarts)
DUPLEX														
TH	Her JXD	110	13	Pos	.....	2E	$\frac{1}{8}-\frac{3}{16}$	1	2	8	6	11	a	27
TH-339	Her JXLD	110	13	Pos	.....	2E	$\frac{1}{8}-\frac{3}{16}$	1	2	8	10	11	b	27
GR-6X4	Con 6427	152	19	Pos	.....	4	$\frac{1}{8}-\frac{3}{16}$	1	2	5½	8	16c	12	32½
RH	Her WXLC3	152	19	Pos	.....	4	$\frac{1}{8}-\frac{3}{16}$	1	2	5½	7	16	d	32½
JH, KH, LH	Her RXB, RXC, RXLD	152	19	Pos	.....	4	$\frac{1}{8}-\frac{3}{16}$	1	2	5½	10	24c	e	32½
FAGEOL VAN														
FV20, FV22	IH-SD 240	.....	.....	Pos	.....	.....	$\frac{1}{16}-\frac{1}{8}$	1	2-3	4	7	8f	8g	18
FV24	IH-BD 269	.....	.....	Pos	.....	.....	$\frac{1}{16}-\frac{1}{8}$	1	2-3	4	7	8g	8h	21
FV26, FV28	IH-BD 282	.....	.....	Pos	.....	.....	$\frac{1}{16}-\frac{1}{8}$	1	2-3	4	7	12	11g	21
FV30	IH-RD 372	.....	.....	Pos	.....	.....	$\frac{1}{16}-\frac{1}{8}$	1	2-3	4	9	12i	20	28
FV32	IH-RD 372	.....	.....	Pos	.....	.....	$\frac{1}{16}-\frac{1}{8}$	1	2-3	4	9	19	20j	28
FV35	IH-RD 406	.....	.....	Pos	.....	.....	$\frac{1}{16}-\frac{1}{8}$	1	2-3	4	9	19	18j	28

LUBRICATION

MODEL No. TRUCK	STANDARD ENGINE	Engine: Viscosity and Temperature Range			Transmission: Summer	Transmission: Winter	Rear Axle: Summer	Rear Axle: Winter	Steering Gear: Summer	Steering Gear: Winter	Universal Joints
DUPLEX											
TH, TH-339	Her JXD, JXLD	40 above 80°	30 @ 32° to 80°	20W below 32°	140	90	140k	90k	l	l	m
RH, JH, KH, GR-6x1	Her WXLC3, RXB, RXC, RXLD, Con 6427	50 above 80°	40 @ 32° to 80°	20W below 32°	140	90	140k	90k	l	l	m
FAGEOL VAN											
FV20, FV22	IH-SD-240	30 above 32°x	20W @ 10° to 32°	10W below 10°	140n	90	140n	90	.....	.....	.....
FV24, FV26, FV28, FV30, FV32, FV35	IH-BD-260, BD-282, RD-372, RD-406	40 above 32°x	20W @ 10° to 32°	10W below 10°	140n	90	140n	90	.....	.....	.....

TUNE UP / VALVE SPRINGS / TENSIONS

MODEL No. TRUCK	STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Intake Valve Opens: Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted): Intake	Operating Tappet Clearance: Exhaust	Spark Plug: Make	Spark Plug: Type	Spark Plug: Size	Spark Plug: Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	VALVE SPRINGS Valve Open: Average Pressure (Lb.)	Valve Open: Length (In.)	Valve Closed: Average Pressure (Lb.)	Valve Closed: Length (In.)	TENSIONS: Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
DUPLEX																							
TH, TH-339	Her JXD, JXLD	6-4x4¼	26-1800	5B	.....	.006	.008	.010	AL	A5B	14mm	.025	.020	6B	.....	.....	58	1.594	43	1.920	75	70o, 60p	56
RH	Her WXLC3	6-4¼x4¾	26-1000	5B	.....	.....	.012	.016	AL	A5B	14mm	.025	.020	TC	.....	.....	102	2$\frac{5}{32}$	50	2$\frac{21}{64}$	75	52o, 63p	52
JH	Her RXB	6-4½x5¼	26-1000	2A	.....	.010	.010	.016	AL	A5B	14mm	.025	.020	.....	.....	.....	102	2$\frac{5}{32}$	50	2$\frac{21}{64}$	75	122o, 105p	80
KH	Her RXC	6-4⅝x5¼	26-1000	2A	.....	.010	.010	.016	AL	A5B	14mm	.025	.020	.....	.....	.....	102	2$\frac{5}{32}$	50	2$\frac{21}{64}$	75	122o, 105p	80
LH	Her RXLD	6-4¾x5¼	26-1000	2A	.....	.010	.010	.016	AL	AT8	14mm	.025	.020	.....	.....	.....	102	2$\frac{5}{32}$	50	2$\frac{21}{64}$	80	175	80
GR-6x4	Con 6427	6-4$\frac{5}{16}$x4⅞	40-1800	.....	.....	.017	.017	.022	CH	8	.....	.025	.020		.....	.....	.....	.....	.....	.....	75	90	90
FAGEOL VAN																							
FV20, FV22	IH-SD-240	6-3$\frac{9}{16}$x4$\frac{1}{64}$	15-20q	10B	.....	.023	r	r	s	s	14mm	.030	.022	2B	.....	.....	145	1.683	.....	2$\frac{11}{16}$t	85-95	75-85	45-55
FV24	IH-BD-269	6-3$\frac{9}{16}$x4½	15-20q	5B	.....	.023	r	r	4	4	14mm	.030	v	3B	.....	.....	107	1.668	.....	2$\frac{33}{64}$t	75-85	100-110	60-70
FV26, FV28	IH-BD-282	6-3$\frac{13}{16}$x4⅛	15-20q	12B	.....	.020	.023	.023	.....	.....				.....	.....	.....	186-196	1.468	.....	2.187t	.....	.....	.....
FV30, FV32	IH-RD-372	6-4⅜x4⅛	15-20q	8B	.....	.023	r	r	w	w	14mm	.030	v	5B	.....	.....	I. 85½	1.503	.....	2$\frac{11}{32}$t	100-110	100-110	75-85
FV35	IH-RD-406	6-4⅜x4½	15-20q	8B	.....	.023	r	r	w	w	14mm	.030	v	5B	.....	.....	O. 137	1.706	.....	2$\frac{5}{16}$t	.....	.....	.....

a—With Timken H-100, 20 pt.; H-200, 28 pt.; H-300, 26 pt. b—With Timken L-100, 23 pt.; L-200, 31 pt.; L-300, 29 pt. c—Auxiliary transmission, 8 pt. d—With Timken Q-100, 31 pt.; Q-200, 34 pt.; Q-300, 32 pt. e—With Timken S-200, U-200, [illegible] 2-speed axle, 20 pt. h—With optional 2-speed axle, 13 pt. i—With optional transmission, 19 pt. j—With optional 2-speed axle, 22 pt. k—Hypoid gear lube. l—Special steering gear lube. m—Chassis lube. n—Use SCL, EP gear oil or multi-purpose gear [illegible] AL-AN7. v—.018-.024. w—AC-43 Com, CH-J6, AL-AN5. x—For multi-stop service no sustained high engine speeds. For highway service and sustained high engine speeds use SAE 40 in SD 240, SAE 50 in others, if starting ability will not permit. [illegible]

O.—Outer. I.—Inner. a—In "04" models add 10 pt for auxiliary transmission. b—On 6-wheelers, same for each rear axle. c—In "04" models add 13 pt for auxiliary transmission. d—2 batteries. e—Cold. f—Center and rear. g—Front and intermediate. h—Normal service. i—Heavy duty.

TRUCK	STANDARD ENGINE																								
FV30, FV32	IH-RD-372	6-4⅝x4½	15-20g	8B	.....	.023	r	r	w	w	14mm	.030	v	5B	.....	.....	186-196	1.468	.....	2.187 t	100-110	100-110	75-85		
FV35	IH-RD-406	6-4⅝x4½	15-20g	8B	.....	.023	r	r	w	w	14mm	.030	v	5B	.....	.....	I. 85½ O. 137	1.503 1.706	.....	2½t 2¾t	100-110	100-110	75-85		

a—With Timken H-100, 20 pt.; H-200, 28 pt.; H-300, 29 pt. b—With Timken L-100, 23 pt.; L-200, 31 pt.; L-300, 29 pt. c—Auxiliary transmission, 8 pt. d—With Timken C-100, 31 pt.; C-200, 34 pt.; C-300, 32 pt. e—With Timken C-300, U-300, 2-speed axle, 20 pt. h—With optional 2-speed axle, 13 pt. i—With optional transmission, 10 pt. j—With optional 2-speed axle, 22 pt. k—Hypoid gear lube. l—Special steering gear lube. m—Dodge lube. n—Use SAE 80 gear oil or multi-purpose gear AL-AN7. v—.018-.024. w—AC-43 Com, CH-J6, AL-AN5. x—For multi-stop service no sustained high engine speeds. For highway service and sustained high engine

O—Outer. I.—Inner. a—In "04" models add 10 pt for auxiliary transmission. b—On 6-wheelers, same for each rear axle. c—In "04" models add 13 pt for auxiliary transmission. d—2 batteries. e—Cold. f—Center and rear. g—Front and intermediate. h—Normal service. i—Heavy duty.

● FEDERAL

TUNE UP

TRUCK	STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After °TC	Intake Valve Opens B-Before A-After Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted) Intake	Operating Tappet Clearance (Hot unless noted) Exhaust	Spark Plug Make	Spark Plug Type	Spark Plug Size	Spark Plug Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed
1800 Series	Her JXB	6-3⅝x4¼	40-2500	5B	.....	.008	.008e	.010e	CH	J10Com	14mm	.025	.020	10B	3B	98
2500 Series	Her JXC	6-3¾x4¼	40-2500	5B	.....	.008	.008e	.010e	CH	J10Com	14mm	.025	.020	10B	3B	98
2900 Series	Her JXD	6-4x4¼	40-2500	5B	.....	.008	.008e	.010e	CH	J10Com	14mm	.025	.020	10B	3B	98
3000 Series	Her JXLD	6-4x4½	40-2500	5B	.....	.010	.010	.010	CH	J10Com	14mm	.025	.020	10B	.....	.....
3400, 4400 Series	Con T-6371	6-4⅛x4⅝	40-2500	16B	.....	.022	.017	.017	.....	.....	18mm	.025	.....	.....	.....	.....
4500, 4550, 5500 Series	Con T-6427	6-4⅛x4⅝	55-2600	16B	.....	.022	.017	.017	.....	.....	18mm	.025	.....	.....	.....	.....
6000 Series	Con U-6501	6-4½x5¼	55-2600	5½B	.....	.014	.012	.012	CH	6Com	18mm	.025	.020	15B	.....	.....
6500, 6550, 6650 Series	Con R-6602	6-4⅞x5⅝	55-2600	6½B	.....	.....	.017	.017	CH	8Com	18mm	.025	.020	7B	.....	96

VALVE SPRINGS

TRUCK	STANDARD ENGINE	Valve Open Average Pressure (Lb.)	Valve Open Length (In.)	Valve Closed Average Pressure (Lb.)	Valve Closed Length (In.)
1800 Series	Her JXB	52	1 7/16	31	1 11/16
2500 Series	Her JXC	52	1 7/16	31	1 11/16
2900 Series	Her JXD	52	1 7/16	31	1 11/16
3000 Series	Her JXLD	112	@	1.626	length
3400, 4400 Series	Con T-6371	O. 129	1.458	71	1 7/8
4500, 4550, 5500 Series	Con T-6427	I. 57 O. 129	1 1/2 1 7/8	12.8 56¾	1 11/16 2 1/4
6000 Series	Con U-6501	I. 57 O. 165	1 11/16 1 5/8	22½ 67-73	2 1/16 2 1/4
6500, 6550, 6650 Series	Con R-6602	I. 85	1¾	33-37	2¼

TENSIONS

TRUCK	STANDARD ENGINE	Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
1800 Series	Her JXB	75	60f, 70g	56
2500 Series	Her JXC	75	60f, 70g	56
2900 Series	Her JXD	75	60f, 70g	56
3000 Series	Her JXLD	75	60f, 70g	56
3400, 4400 Series	Con T-6371	See Continental, page 105		
4500, 4550, 5500 Series	Con T-6427	See Continental, page 105		
6000 Series	Con U-6501	See Continental, page 105		
6500, 6550, 6650 Series	Con R-6602	See Continental, page 105		

LUBRICATION

TRUCK	STANDARD ENGINE	Engine Viscosity and Temperature Range			Transmission Summer	Transmission Winter	Rear Axle Summer	Rear Axle Winter	Steering Gear Summer	Steering Gear Winter	Universal Joints
All models		40h, 50l @ 50° to 110°	30 @ 15° to 50°	10W @ 15° to −20°	160	90	160	90	.....	.....	160

BATTERY

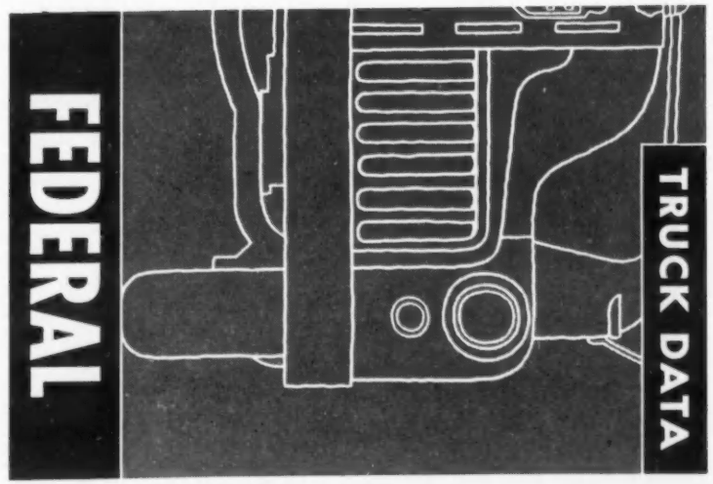
TRUCK	STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.
1800	Her JXB	136	19	Pos	3	.....
2500	Her JXC	136	19	Pos	3	.....
2900	Her JXD	136	19	Pos	3	.....
2952, 3052	Her JXD, JXLD	136	19	Pos	3	.....
3401, 3402, 3452, 4401, 4402	Con T-6371	135	19	Pos	3	.....
4501, 4502, 4504, 4506, 4507, 4508, 4551, 4554	Con T-6427	135	19	Pos	3	.....
5501, 5502	Con T-6427	135	19	Pos	3	.....
6001, 6002	Con U-6501	135	19	Pos	3	.....
6501, 6502, 6554, 6654	Con R-6602	152d	19	Pos	3	.....

FRONT END

TRUCK	STANDARD ENGINE	Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)
1800	Her JXB	1/8	1	3	8
2500	Her JXC	1/8	1	3	8
2900	Her JXD	1/8	1	3	8
2952, 3052	Her JXD, JXLD	1/8	1	3	8
3401, 3402, 3452, 4401, 4402	Con T-6371	1/8	1	3	8
4501, 4502, 4504, 4506, 4507, 4508, 4551, 4554	Con T-6427	1/8	1	3	8
5501, 5502	Con T-6427	1/8	1	3	8
6001, 6002	Con U-6501	1/8	1	3	8
6501, 6502, 6554, 6654	Con R-6602	1/8	1	3	8

CAPACITIES

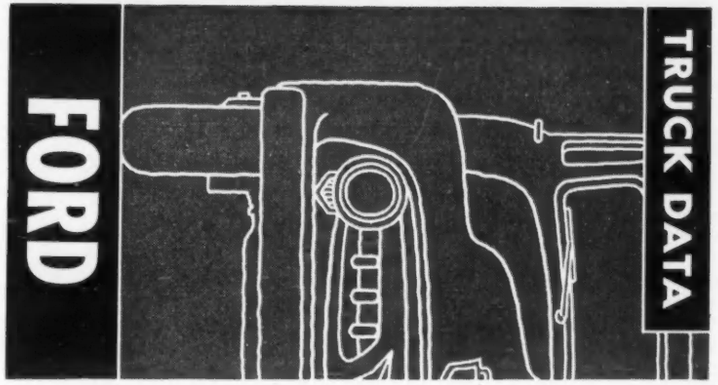
TRUCK	STANDARD ENGINE	Lubricant Engine (Quarts)	Lubricant Transmission (Pints)	Lubricant Rear Axle (Pints)	Cooling System (Quarts)
1800	Her JXB	9	4	7	25
2500	Her JXC	9	13	10-13	25
2900	Her JXD	9	13a	12b	25
2952, 3052	Her JXD, JXLD	9	13a	11b	25
3401, 3402, 3452, 4401, 4402	Con T-6371	8	20a	12b	25
4501, 4502, 4504, 4506, 4507, 4508, 4551, 4554	Con T-6427	8	20a	16b	31
5501, 5502	Con T-6427	8	20a	19	31
6001, 6002	Con U-6501	14	12c	38	31
6501, 6502, 6554, 6654	Con R-6602	14	12c	40b	40



• FORD

BATTERY / FRONT END / CAPACITIES

TRUCK	STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	Lubricant: Engine (Quarts)	Lubricant: Transmission (Pints)	Lubricant: Rear Axle (Pints)	Cooling System (Quarts)
F100	Own EBR, EBV	90	17	Pos	.....	.....	0–⅛	¼–1	3–4	4	4a	2¾d,e	3	18½f
F250	Own EBR, EBV	90	17	Pos	.....	.....	0–⅛	¼–1	3–4	4	4a	5½e	4	18½f
P350	Own EBT	90	17	Pos	.....	.....	0–⅛	¼–1	3–5	8	4	5½e	4	13½
F350	Own EBS, EBW	90	17	Pos	.....	.....	0–⅛	¼–1	3–5	4	4a	5½e	5	18½
F500, B500	Own EBS, EBW	100k	19k	Pos	.....	.....	0–⅛	¼–1	3–5	4	4a	8g	13½	18½
P500	Own EBT	100	19	Pos	.....	.....	0–⅛	¼–1	3–5	8	4	5½e	13½	18½
F600, C600, B600	Own EBS, EBW, EBZ	100k	19k	Pos	.....	.....	0–⅛	¼–1	3–5	4	5b	8h	15	22p
F700, B900, C700	Own EBZ	100k	19k	Pos	.....	.....	0–⅛	¼–1	3–5	8	6	8h	11	22½
F750, B750, C750	Own EAL	120	17m	Pos	.....	.....	0–⅛	¼–1	3–5	8	8	12	11	26
F800, C800, F900, C900	Own EAM	120	17m	Pos	.....	.....	0–⅛	¼–1	3–5	4	8	12	22	26
C500	Own EBW	100	19	Pos	.....	.....	0–⅛	¼–1	3–5	4	5	8h	13½	22
T700	Own EBZ, EAL	100n	19n	Pos	.....	.....	0–⅛	¼–1	3–5	5½	6c	7½i	27j	22½r
T800	Own EAM	120	17m	Pos	.....	.....	0–⅛	¼–1	3–5	5½	8	12	49j	26



LUBRICATION

TRUCK	STANDARD ENGINE	Engine: Viscosity and Temperature Range			Transmission: Summer	Transmission: Winter	Rear Axle: Summer	Rear Axle: Winter	Steering Gear: Summer	Steering Gear: Winter	Universal Joints
All standard units	Own	30 above 32°	20/20W above 10°	10W above −10°s	v	v	90u	90u	90w	90w	140w
All automatic transmission units	Own	30 above 32°	20/20W above 10°	10W above −10°s	t	t	90u	90u	90w	90w	140w

TUNE UP / VALVE SPRINGS / TENSIONS

TRUCK	STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Intake Valve Opens B-Before A-After: Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted): Intake	Operating Tappet Clearance (Hot unless noted): Exhaust	Spark Plug: Make	Spark Plug: Type	Spark Plug: Size	Spark Plug: Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Valve Springs: Valve Open: Average Pressure (Lb.)	Valve Springs: Valve Open: Length (In.)	Valve Springs: Valve Closed: Average Pressure (Lb.)	Valve Springs: Valve Closed: Length (In.)	Tensions: Cylinder Head (Lb.-Ft.)	Tensions: Main Bearings (Lb.-Ft.)	Tensions: Connecting Rod Bearings (Lb.-Ft.)
F100, F250	Own EBR	6–3.62x3.6	45–50–2000	13B	.....	.013†	.015	.019	CH	H-9	14mm	.027	x	5B	.....	120▼	124–140	1.505	54–62	1.821	75■	95–105	45–50
F100*, F250*	Own EBV	8–3.5x3.1	45–50–2000	8B	.....	.015†	.016	.018	CH	H-9	14mm	.027	y	10B	.....	130▼	124–140	1.505	54–62	1.821	75■	80–90	45–50
F350, F500, B500, B600	Own EBS	6–3.62x3.6	45–50–2000	13B	.....	.013†	.015	.019	CH	H-9	14mm	.027	x	5B	.....	120▼	124–140	1.505	54–62	1.821	75■	95–105	45–50
F350*, F500*, B500*, B600*	Own EBW	8–3.5x3.1	45–50–2000	8B	.....	.015†	.016	.018	CH	H-9	14mm	.027	y	10B	.....	130▼	124–140	1.505	54–62	1.821	75■	80–90	45–50
F800, C600, B600	Own EBW	8–3.5x3.1	45–50–2000	8B	.....	.015†	.016	.018	CH	H-9	14mm	.027	y	10B	.....	130▼	124–140	1.505	54–62	1.821	75■	80–90	45–50
F800*, C600*, B600*	Own EBZ	8–3.62x3.1	45–50–2000	8B	.....	.015†	.016	.018	CH	H-9	14mm	.027	y	10B	.....	120▼	124–140	1.505	54–62	1.821	75■	80–90	45–50
C500	Own EBW	8–3.5x3.1	45–50–2000	8B	.....	.015†	.016	.018	CH	H 9	14mm	.027	y	10B	.....	130▼	124–140	1.505	54–62	1.821	75■	80–90	45–50
P350, P500	Own EBT	6–3.62x3.6	45–50–2000	13B	.....	.013†	.015	.019	CH	H-9	14mm	.027	x	5B	.....	120▼	124–140	1.505	54–62	1.821	75■	95–105	45–50
F700, C700, T700	Own EBZ	8–3.62x3.1	45–50–2000	8B	.....	.015†	.016	.018	CH	H-9	14mm	.027	y	10B	.....	120▼	124–140	1.505	54–62	1.821	75■	80–90	45–50
T700*, F750, C750	Own EAL	8–3.56x3.5	30–34–2000	18B	.....	.010†	.009	.021	CH	H-9	14mm	.030	y	10B	.....	115▼	133–147	1.470	64–70	1.800	90■	120–130	45–50
F800, C800, T800, F900, C900	Own EAM	8–3.8x3.5	30–34–2000	18B	.....	.010†	.009	.021	CH	H-9	14mm	.030	y	10B	.....	115▼	133–147	1.470	64–70	1.800	90■	120–130	45–50

*—Optional engine. †—Cam lift is obtained with indicator on push rod, rocker arm disengaged. ▼—Standard comp. ratio at sea level, at cranking speed ÷10. Normal cranking speed with warm engine, throttle plates wide open, all spark plugs removed and good battery. ■—Cylinder head bolts are torqued in three stages: EAL, EAM (in sequence) 70 cold, 80 cold and 90 hot after 20 minutes fast idling. Others—55 cold, 65 cold and 75 hot after 20 minutes fast idling. a—EB engine, 5 qts. b—EBS, 4 qts.; EBZ, 6 qts. c—EAL, 8 qts. d—Optional 3-speed H. D. transmission, 5½ pts; 3-speed overdrive transmission, 4 pts. e—Optional 4-speed transmission, 8 pts; Fordomatic, 19 pts. (Fordomatic with single rear wheels only.) f—Cooling system 22 qts on the following units with 8 cyl. engine: F100, F250, F350, F500, B500, B600 (192" w.b.). g—Optional 3-speed H. D. 5½ pts; 5-speed light duty 7½ pts. h—With optional 5-speed light duty transmission 7½ pts. i—EAL engine 12 pts. j—Includes both rear axles and power divider. k—B units 120 amphr., 17 Hi Plate battery. m—Hi Plate. n—EAL engine 120 amp. hr. 17 Hi Plate. p—EBZ engine 22½ qts, EBS 18½ qts. r—EAL engine 28 qts. s—5W below −10°. t—Fordomatic fluid Type "A". u—Multipurpose lube, 140 above 100°, 80 below −10°. v—Multipurpose lube 90 above 32°, 80 below 32°. w—Multipurpose lube. x—.024-.026. y—.014-.016.

a—Front axle, 6 pt. b—Same for front axle. c—2 batterics. d—4 batterics. e—.010-.012 cold. f—.014-.016 cold. g—Set valve lash at value given; valve should then open TDC. h—.022-.024 cold. i—.008-.010 cold. j—.019-.021 cold. k—.012-.014 cold. l—.024-.026 cold. m—.018-.020 cold. n—.023-.025 cold. o—light duty. p—Heavy duty. q—.008" GO, .010" NOGO. r—Battery data for Model No. HRC only. s—Model Nos. M10D, M6X6D—63 qt. t—Model No. HCY6X6G—46 qt. r—Model No. H6X6G-153 amp hr capacity

• FWD

TUNE UP / VALVE SPRINGS / TENSIONS

TRUCK	STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Intake Valve Opens B-Before A-After: Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted): Intake	Operating Tappet Clearance (Hot unless noted): Exhaust	Spark Plug: Make	Spark Plug: Type	Spark Plug: Size	Spark Plug: Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Valve Springs: Valve Open: Average Pressure (Lb.)	Valve Springs: Valve Open: Length (In.)	Valve Springs: Valve Closed: Average Pressure (Lb.)	Valve Springs: Valve Closed: Length (In.)	Tensions: Cylinder Head (Lb.-Ft.)	Tensions: Main Bearings (Lb.-Ft.)	Tensions: Connecting Rod Bearings (Lb.-Ft.)
F100, F250	Own EBR	6–3.62x3.6	45–50–2000	13B	.....	.013†	.015	.019	CH	H-9	14mm	.027	x	5B	.....	120▼	124–140	1.505	54–62	1.821	75■	95–105	45–50
F100*, F250*	Own EBV	8–3.5x3.1	45–50–2000	8B	.....	.015†	.016	.018	CH	H-9	14mm	.027	y	10B	.....	130▼	124–140	1.505	54–62	1.821	75■	80–90	45–50
F350, F500, B500, B600	Own EBS	6–3.62x3.6	45–50–2000	13B	.....	.013†	.015	.019	CH	H-9	14mm	.027	x	5B	.....	120▼	124–140	1.505	54–62	1.821	75■	95–105	45–50
F350*, F500*, B500*, B600*	Own EBW	8–3.5x3.1	45–50–2000	8B	.....	.015†	.016	.018	CH	H-9	14mm	.027	y	10B	.....	130▼	124–140	1.505	54–62	1.821	75■	80–90	45–50
F800, C600, B600	Own EBW	8–3.5x3.1	45–50–2000	8B	.....	.015†	.016	.018	CH	H-9	14mm	.027	y	10B	.....	130▼	124–140	1.505	54–62	1.821	75■	80–90	45–50
F800*, C600*, B600*	Own EBZ	8–3.62x3.1	45–50–2000	8B	.....	.015†	.016	.018	CH	H-9	14mm	.027	y	10B	.....	120▼	124–140	1.505	54–62	1.821	75■	80–90	45–50
C500	Own EBW	8–3.5x3.1	45–50–2000	8B	.....	.015†	.016	.018	CH	H 9	14mm	.027	y	10B	.....	130▼	124–140	1.505	54–62	1.821	75■	80–90	45–50
P350, P500	Own EBT	6–3.62x3.6	45–50–2000	13B	.....	.013†	.015	.019	CH	H-9	14mm	.027	x	5B	.....	120▼	124–140	1.505	54–62	1.821	75■	95–105	45–50
F700, C700, T700	Own EBZ	8–3.62x3.1	45–50–2000	8B	.....	.015†	.016	.018	CH	H-9	14mm	.027	y	10B	.....	120▼	124–140	1.505	54–62	1.821	75■	80–90	45–50
T700*, F750, C750	Own EAL	8–3.56x3.5	30–34–2000	18B	.....	.010†	.009	.021	CH	H-9	14mm	.030	y	10B	.....	115▼	133–147	1.470	64–70	1.800	90■	120–130	45–50
F800, C800, T800, F900, C900	Own EAM	8–3.8x3.5	30–34–2000	18B	.....	.010†	.009	.021	CH	H-9	14mm	.030	y	10B	.....	115▼	133–147	1.470	64–70	1.800	90■	120–130	45–50

arm disengaged. *—Standard comp. ratio at sea level, at cranking speed ±10. Normal cranking speed with warm engine, throttle plates wide open, all spark plugs removed and good battery. a—Cylinder head bolts are torqued in three stages: EAL, EAM (in sequence) 70 cold, 80 cold and 90 hot after 20 minutes fast idling. Others—55 cold, 65 cold and 75 hot after 20 minutes fast idling. a—EB engine, 5 qts. b—EBS, 4 qts.; EBZ, 6 qts. c—EAL, 8 qts. d—Optional 3-speed H. D. transmission, 5½ pts; 3-speed overdrive transmission, 4 pts. e—Optional 4-speed transmission, 8 pts; Fordomatic, 19 pts. (Fordomatic with single rear wheels only.) f—Cooling system 22 qts on the following units with 8 cyl. engine: F100, F250, F350, F500, B500, B600 (192" w.b.). g—Optional 3-speed H. D. 5½ pts; 5-speed light duty 7½ pts. h—With optional 5-speed light duty transmission 7½ pts. i—EAL engine 12 pts. j—Includes both rear axles and power divider. k—B units 120 amphr., 17 Hi Plate battery. m—Hi Plate. n—EAL engine 120 amp. hr. 17 Hi Plate. p—EBZ engine 22½ qts. EBS 18½ qts. r—EAL engine 28 qts. s—5W below −10°. t—Fordomatic fluid Type "A". u—Multipurpose lube, 140 above 100°, 80 below −10°. v—Multipurpose lube 90 above 32°, 80 below 32°. w—Multipurpose lube. x—.024-.026. y—.014-.016.

a—Front axle, 6 pt. b—Same for front axle. c—2 batteries. d—4 batteries. e—.010-.012 cold. f—.014-.016 cold. g—Set valve lash at value given; valve should then open TDC. h—.022-.024 cold. i—.008-.010 cold. j—.019-.021 cold. k—.012-.014 cold. l—.024-.026 cold. m—.018-.020 cold. n—.023-.025 cold. o—light duty. p—Heavy duty. q—.008" GO, .010" NOGO. r—Battery data for Model No. HRC only. s—Model Nos. M10D, M6X6D—23 qt. t—Model No. HCY6X6Q—46 qt. r—Model No. H6X6G-153 amp hr capacity

• FWD

TUNE UP

TRUCK — STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After		Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted)		Spark Plug				Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed
			°TC	Flywheel Teeth °TC		Intake	Exhaust	Make	Type	Size	Gap				
MODEL No.															
LD.....Her OXLD3	6-3 7/16x4 1/4	35-3200	5B	1¼B	.006	e	f	AL	AT8	14mm	.025	.020	6B	1¼B	110
HA, HAY.....Wau 195-GKA	6-4 1/16x4	30-2800	10B	6B	.034g	f	h	CH	8Cem	18mm	.025	.020	7B	2¼B	110
HR, HRY, HG, HGY, H6X6G.....Wau MZA	6-4 1/16x4 1/4	40-2800	8B	3B	.008	i	j	CH	7Cem	14mm	.025	.020	5B	2B	110
HRC, YU.....Wau 140-GK, 140-GKB	6-4 1/16x5 1/2	40-2250	5A	1¾A	.056g	k	l	CH	H9	18mm	.025	.020	TDC	TDC	140
HC6X6G, HCY6X6G.....Wau 140-GKB	6-4 1/16x5 1/2	40-2250	5A	1¾A	.056g	k	l	CH	H9	18mm	.025	.020	TDC	TDC	140
SU.....Wau SRKR	6-4 1/16x5 1/2	40-2250	8A	3A	.004	i	l	CH	J9	14mm	.025	.020	4B	1½B	123
SUD, YUD, HC6X6D, HCY6X6D.....GMC 4-71	4-4 1/16x5	45					q								390
AU, ZU.....Wau 140-GZ	6-4 1/16x5 1/2	40-2250	5A	1¾A	.056g	k	m	CH	H9	18mm	.025	.020	TDC	TDC	140
ZUD, MU6X6D.....GMC 6-71	6-4 1/16x5	45					q								390
M7G, M10G, MU6X6G, M6X6G.....Wau 145-GK	6-5 1/16x6	40-2400	5A	?A	.064g	k	n	CH	H9	18mm	.025	.020	TDC	TDC	140
M7D, M10D, M6X6D.....Cum HRBB	6-5 1/16x6	40-2000	5B			.014	.022								525

VALVE SPRINGS

TRUCK — STANDARD ENGINE	Valve Open		Valve Closed	
	Average Pressure (Lb.)	Length (In.)	Average Pressure (Lb.)	Length (In.)
MODEL No.				
LD.....Her OXLD3	39	1 1/16	18	1 1/16
HA, HAY.....Wau 195-GKA	124	1 1/16	46	2 1/16
HR, HRY, HG, HGY, H6X6G.....Wau MZA	100	1 1/16	64	2 1/16
HRC, YU.....Wau 140-GK, 140-GKB	86 ± 6	2 1/16	31 ± 2	1 1/16
HC6X6G, HCY6X6G.....Wau 140-GKB	89-99	2 1/16	54-64	2 1/16
SU.....Wau SRKR	89-99	2 1/16	54-64	2 1/16
SUD, YUD, HC6X6D, HCY6X6D.....GMC 4-71				
AU, ZU.....Wau 140-GZ	86 ± 6	2 1/16	31 ± 2	1 1/16
ZUD, MU6X6D.....GMC 6-71				
M7G, M10G, MU6X6G, M6X6G.....Wau 145-GK	105-115	3 1/16	65-75	2 1/16
M7D, M10D, M6X6D.....Cum HRBB	129-143	2 1/16	83-91	3 1/16

TENSIONS

Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
See Engines, pages 104-107		

LUBRICATION

TRUCK — STANDARD ENGINE	Engine Viscosity and Temperature Range			Transmission		Rear Axle		Steering Gear		Universal Joints
	Summer	Mild Winter	Winter	Summer	Winter	Summer	Winter	Summer	Winter	
MODEL No.										
LD	30	20 below 30°	10 below 0°	140	90	90	80	140	90	140-90
HA, HAY	20o, 30p	10Wo, 20p	10W	140	90	90	80	140	90	140-90
SUD, YUD, HC6X6D, HCY6X6D, ZUD, MU6X6D	30 above 30°	20W@ 0 to 30°	10W below −10°	140	90	90	80	140	90	140-90
ALL OTHER MODELS	30o, 40p	20o, 30p	10Wo, 20Wp	140	90	90	80	140	90	140-90

BATTERY

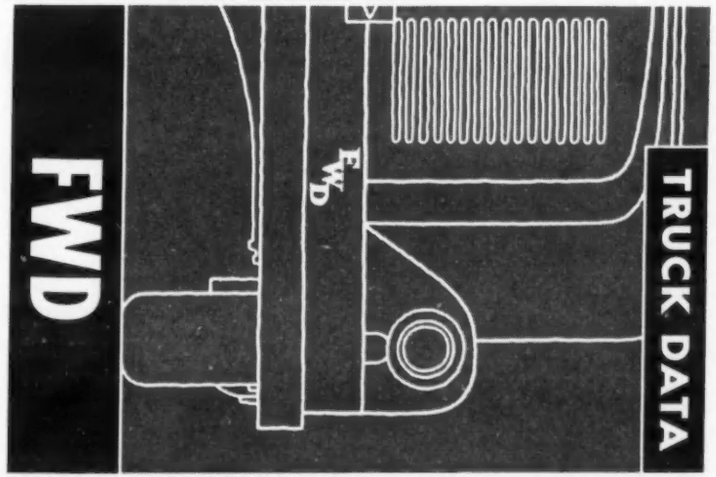
TRUCK — STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.
MODEL No.					
LD.....Her OXLD3	130	19	Pos		3
HA, HAY.....Wau 195-GKA	150	19	Pos	4H	4
HR, HRY, HG, HGY, H6X6G.....Wau MZA	150r	19	Pos	4H	4
HRC, HC6X6G, HCY6X6G.....Wau 140-GKB	150a	19	Pos	4H	4
SU.....Wau SR-KR	150c	19	Pos	4H	4
SUD.....GMC 4-71					
AU.....Wau 140-GZ					
YU.....Wau 140-GK	150c	19	Pos	4H	4
YUD.....GMC 4-71					
ZU.....WAU 140-GK	150c	19	Pos	4H	4
ZUD.....GMC 6-71					
M7G, M10G, M6X6G.....Wau 145-GK	150c	19	Pos	4H	4
MU6X6G.....Wau 145-GK	153c	19	Pos	4H	4
M7D, M10D, M6X6D.....Cum HRBB	150d	19	Pos	BD	BD
HC6X6D, HCY6X6D.....GMC 4-71					
MU6X6D.....Cum HRBB					

FRONT END

TRUCK — STANDARD ENGINE	Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)
MODEL No.				
LD.....Her OXLD3	1/16-1/8	3/4	1	0
HA, HAY.....Wau 195-GKA	1/16-1/8	1	2	8
HR, HRY, HG, HGY, H6X6G.....Wau MZA	1/16-1/8	1	2	8
HRC, HC6X6G, HCY6X6G.....Wau 140-GKB	1/16-1/8	1	2	8
SU.....Wau SR-KR	1/16-1/8	1	2	8
SUD.....GMC 4-71	1/16-1/8	1	2	8
AU.....Wau 140-GZ	1/16-1/8	1	2	8
YU.....Wau 140-GK	1/16-1/8	1	2	8
YUD.....GMC 4-71	1/16-1/8	1	2	8
ZU.....WAU 140-GK	1/16-1/8	1	2	8
ZUD.....GMC 6-71	1/16-1/8	1	2	8
M7G, M10G, M6X6G.....Wau 145-GK	1/16	0	5	0
MU6X6G.....Wau 145-GK	1/16-3/16	1	2	8
M7D, M10D, M6X6D.....Cum HRBB	1/16	0	5	0
HC6X6D, HCY6X6D.....GMC 4-71	1/16-1/8	1	2	8
MU6X6D.....Cum HRBB	1/16-1/8	1	2	8

CAPACITIES

TRUCK — STANDARD ENGINE	Lubricant			Cooling System (Quarts)
	Engine (Quarts)	Transmission (Pints)	Rear Axle (Pints)	
MODEL No.				
LD.....Her OXLD3	6	6	9a	16
HA, HAY.....Wau 195-GKA	6	20	6b	28
HR, HRY, HG, HGY, H6X6G.....Wau MZA	12	20	6b	28
HRC, HC6X6G, HCY6X6G.....Wau 140-GKB	14	20	6b	50t
SU.....Wau SR-KR	12	24	8b	32
SUD.....GMC 4-71	16	24	8b	47
AU.....Wau 140-GZ	14	24	8b	46
YU.....Wau 140-GK	14	28	12b	46
YUD.....GMC 4-71	16	28	12b	47
ZU.....WAU 140-GK	14	28	16b	46
ZUD.....GMC 6-71	20	28	16b	47
M7G, M10G, M6X6G.....Wau 145-GK	20	28	16b	64
MU6X6G.....Wau 145-GK	20	28	16b	64
M7D, M10D, M6X6D.....Cum HRBB	24	28	16b	64e
HC6X6D, HCY6X6D.....GMC 4-71	15	20	6b	30
MU6X6D.....Cum HRBB	20	28	16b	63



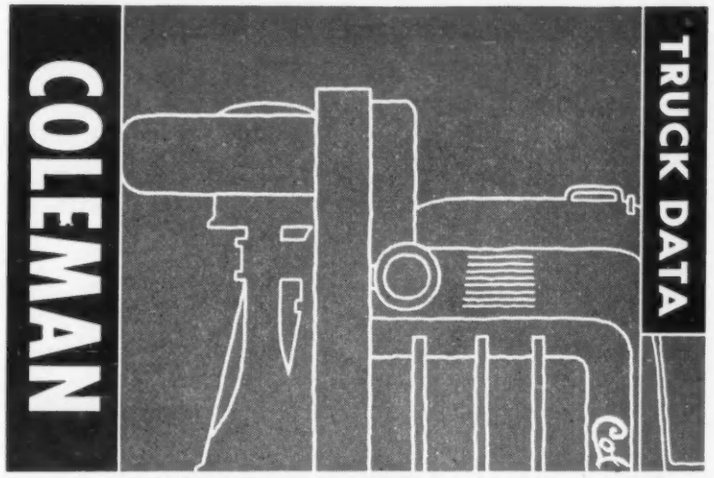
● COLEMAN

BATTERY / FRONT END / CAPACITIES

TRUCK	STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	Lubricant: Engine (Quarts)	Lubricant: Transmission (Pints)	Lubricant: Rear Axle (Pints)	Cooling System (Quarts)
G-55-S	Buda LO-525	135a	21	Pos	.....	5	0–1/16	0	3+	0	12	24	12	48

LUBRICATION

TRUCK	STANDARD ENGINE	Engine: Viscosity and Temperature Range			Transmission: Summer	Transmission: Winter	Rear Axle: Summer	Rear Axle: Winter
G-55-S	Buda LO-525	40 above 32°	20 below 32°	.....	160b	90b	160b	90b



TUNE UP / VALVE SPRINGS / TENSIONS

TRUCK	STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Intake Valve Opens B-Before A-After: Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted): Intake	Operating Tappet Clearance (Hot unless noted): Exhaust	Spark Plug: Make	Spark Plug: Type	Spark Plug: Size	Spark Plug: Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Valve Springs: Valve Open: Average Pressure (Lb.)	Valve Springs: Valve Open: Length (In.)	Valve Springs: Valve Closed: Average Pressure (Lb.)	Valve Springs: Valve Closed: Length (In.)	Tensions: Cylinder Head (Lb.-Ft.)	Tensions: Main Bearings (Lb.-Ft.)	Tensions: Connecting Rod Bearings (Lb.-Ft.)
G-55-S	Buda LO-525	6-4½x5½	30–2000	10B	.....	.....	.009	.013	AC	44	14mm	.025	.025	35B	.....	.....	100	2⅛	75	2⅞	95–105	150–160	95–100

a—Four batteries. b—SAE.

a—.018"-.024". b—.008-.010 hot. c—.011-.013 cold. d—Multi-purpose gear lubricant. e—Use 80 multi-purpose gear lubricant below 0°. f—No. 1 steering gear lubricant. g—Fuller transmission, gear oil, 140 summer, 90 winter. h—Multi-purpose gear lubricant. Timken, 140 above 0°, 90 below 0°. Eaton, 90 above 0°, 80 below 0°. Worm, gear oil, 140 above 0°, 90 below 0°. J—Power steering systems use Hydra-Matic fluid Type A. †—Equipped with Hydra-Matic.

● GMC

TUNE UP / VALVE SPRINGS / TENSIONS

TRUCK	STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Intake Valve Opens B-Before A-After: Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted): Intake	Operating Tappet Clearance (Hot unless noted): Exhaust	Spark Plug: Make	Spark Plug: Type	Spark Plug: Size	Spark Plug: Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Valve Springs: Valve Open: Average Pressure (Lb.)	Valve Springs: Valve Open: Length (In.)	Valve Springs: Valve Closed: Average Pressure (Lb.)	Valve Springs: Valve Closed: Length (In.)	Tensions: Cylinder Head (Lb.-Ft.)	Tensions: Main Bearings (Lb.-Ft.)	Tensions: Connecting Rod Bearings (Lb.-Ft.)
All models using	Own 248	6-3⅞x3⅓	5@Idle 40@Gov.	14B	.....	.020	.012	.020	AC	44Com	14mm	.030	a	5B	.....	125	124–140	1.505	.....	.....	90–100	90–100	40–45
All models using	Own 270	6-3⅞x4	5@Idle 40@Gov.	14B	.....	.020	.012	.020	AC	44Com	14mm	.030	a	5B	.....	125	124–140	1.505	.....	.....	90–100	90–100	40–45
All models using	Own 302	6-4x4	5@Idle 40@Gov.	14B	.....	.020	.012	.016	AC	44Com	14mm	.030	a	6B	.....	125	124–140	1.505	.....	.....	75–80	90–100	40–45
All models using	Own 328	6-4⅛x5	35–40–1000	16B	.....	.022	.012	.016	AC	44Com	14mm	.030	a	6B	.....	110	160–172	1⅜	.....	.....	75–80	90–100	80 min
All models using	Own 503	6-4⅛x5⅛	35–40–1000	16B	.....	.022	.012	.016	AC	44Com	14mm	.030	a	6B	.....	110	160–172	1⅜	.....	.....	75–80	90–100	80 min
All models using	Own 4-71	4-4¼x5	4@Idle 25@Gov.	Diesel		.....	.....	.....	b	.....	.....	.....	.....	.....	.....	.....	130	1⅜	.....	.....	165–175	155–185	65–75
All models using	Own 6-71	6-4¼x5	4@Idle 25@Gov.	Diesel		.....	.....	.....	c	.....	.....	.....	.....	.....	.....	.....	130	1⅜	.....	.....	165–175	155–185	65–75

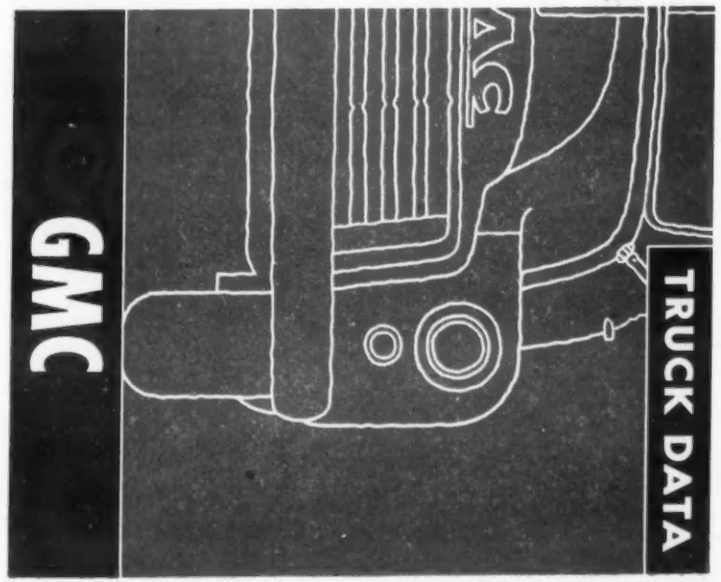
TRUCK	STANDARD ENGINE																					
All models using	Own 270	6-3⅞x4	5@Idle 40@Gov.	14B		.020	.012	.020	AC	44Com	14mm	.030	a	5B		125	124-140	1.505			90-100	90-100	40-45
All models using	Own 302	6-4x4	5@Idle 40@Gov.	14B		.020	.012	.016	AC	44Com	14mm	.030	a	6B		125	124-140	1.505			75-80	90-100	40-45
All models using	Own 426	8-4⅛x5	35-40-1000	16B		.022	.012	.016	AC	44Com	14mm	.030	a	6B		110	160-172	1¼			75-80	90-100	80 min
All models using	Own 503	8-4⅛x5½	35-40-1000	16B		.022	.012	.016	AC	44Com	14mm	.030	a	6B		110	160-172	1¼			75-80	90-100	80 min
All models using	Own 4-71	4-4¼x5	4@idle 25@Gov.		Diesel				b								130	1¼			165-175	155-185	65-75
All models using	Own 6-71	6-4¼x5	4@idle 25@Gov.		Diesel				c								130	1¼			165-175	155-185	65-75

MODEL No. — LUBRICATION

TRUCK	STANDARD ENGINE	Engine: Viscosity and Temperature Range			Transmission: Summer	Transmission: Winter	Rear Axle: Summer	Rear Axle: Winter	Steering Gear: Summer	Steering Gear: Winter	Universal Joints
100-24, 150-24, 250-24, 300-24, 350-24, F350-24, S300-24	Own 248	30 above 90°	20W @ 90° to 10°	10W or 5W below 10°	90d	90d,e	90d	90d,e	f	f	90d
100-24†, 150-24†, 250-24†, 350-24†, PM150-24, PM250-24, M350-24, S400-24, M350-27, M400-27	Own 248, 270	30 above 90°	20W @ 90° to 10°	10W or 5W below 10°	Hydra-Matic Fluid A		90d	90d,e	f	f	90d
350-27, F350-27, 400-27, S400-27	Own 270	30 above 90°	20W @ 90° to 10°	10W or 5W below 10°	90d	90d,e	h	h	f	j	90d
450-30, F450-30, S450-30, W450-30, 470-30, F470-30, 620-36	Own 302, 360	30 above 90°	20W @ 90° to 10°	10W or 5W below 10°	50	50	h	h	f	j	50
M-450-30, M470-30	Own 302	30 above 90°	20W @ 90° to 10°	10W or 5W below 10°	Hydra-Matic Fluid A		h	h	f	j	50
W620-42, FW620-42, 630-42, F630-42, 630-50, W630-50, 660-50, F660-50, 670-50	Own 426, 503	30 above 90°	20W @ 90° to 10°	10W or 5W below 10°	50g	50g	h	h	f	j	50
Diesel models	Own 4-71, 6-71	30 above 30°	20W @ 30° to 0°	10W below 0°	50g	50g	h	h	f	j	50

MODEL No. — BATTERY — FRONT END — CAPACITIES

TRUCK	STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	Lubricant: Engine (Quarts)	Lubricant: Transmission (Pints)	Lubricant: Rear Axle (Pints)	Cooling System (Quarts)
100-24	Own 248	100	15	Pos			1/16-1/8	1½	2	7°10″	8	1½	4½	17
100-24†	Own 248	100	15	Pos			1/16-1/8	1½	2	7°10″	8	9	4½	17
150-24	Own 248	100	15	Pos			1/16-1/8	1½	2½	7°10″	8	1½	6	17
150-24†, PM150-24	Own 248	100	15	Pos			1/16-1/8	1½	2½	7°10″	8	9	6	17
250-24	Own 248	100	15	Pos			1/16-1/8	1½	2½	7°10″	8	9	6	17
250-24†, PM250-24	Own 248	100	15	Pos			1/16-1/8	1½	2½	7°10″	8	9	6	17
300-24	Own 248	100	15	Pos			1/16-1/8	1½	3	7°10″	8	6	11	17
S300-24	Own 248	125	19	Pos			1/16-1/8	1½	3	7°10″	8	6	11	18
350-24, F350-24	Own 248	100	15	Pos			1/16-1/8	1½	3	7°10″	8	6	12	18
M350-24	Own 248	100	15	Pos			1/16-1/8	1½	3	7°10″	8	12	12	18
S400-24	Own 248	125	19	Pos			1/16-1/8	1½	1½	5	8	12	12	18
350-27, F350-27	Own 270	100	15	Pos			1/16-1/8	1½	3	7°10″	8	6	12	18
M350-27	Own 270	100	15	Pos			1/16-1/8	1½	3	7°10″	8	12	12	18
400-27	Own 270	100	15	Pos			1/16-1/8	1½	1½	7°10″	8	6	20	18
S400-27	Own 270	125	19	Pos			1/16-1/8	1½	1½	5	8	12	12	18
M400-27	Own 270	100	15	Pos			1/16-1/8	1½	1½	7°10″	8	12	20	18
450-30	Own 302	100	15	Pos			1/16-1/8	1	1¾	7°10″	8	12	20	18
F450-30	Own 302	100	15	Pos			1/16-1/8	1	2½	7°10″	8	12	20	18
S450-30	Own 302	125	19	Pos			1/16-1/8	1	1¾	5	8	12	20	18
W450-30, 470-30, M470-30	Own 302	100	15	Pos			1/16-1/8	1	1¾	7°10″	8	12	22	18
M450-30	Own 302	100	15	Pos			1/16-1/8	1	1¾	7°10″	8	12	20	18
F470-30	Own 302	100	15	Pos			1/16-1/8	1	2½	7°10″	8	12	22	18
620-36	Own 360	115	17	Pos			1/16-1/8	1	1	4	9	12	22	27
W620-42, FW620-42	Own 426	115	17	Pos			1/16-1/8	1	1	4	9	17	46	29
630-42	Own 426	115	17	Pos			1/16-1/8	1	1	4	9	14	22	29
F630-42	Own 426	115	17	Pos			1/16-1/8	1	1	5½	9	14	22	29
630-50	Own 503	115	17	Pos			1/16-1/8	1	1	4	9	9	22	29
W630-50	Own 503	115	17	Pos			1/16-1/8	1	1	5½	9	32	62	29
660-50	Own 503	115	17	Pos			1/16-1/8	1	1	4	9	9	24	29
F660-50	Own 503	115	17	Pos			1/16-1/8	1	1	5½	9	9	24	29
670-50	Own 503	115	17	Pos			1/16-1/8	1	1	5½	9	9	38	29
DFW620-47	Own 4-71	205	27	Pos			1/16-1/8	1	1	5½	21	32	46	28
D630-47	Own 4-71	205	27	Pos			1/16-1/8	1	1	4	21	14	22	28
DW630-47	Own 4-71	205	27	Pos			1/16-1/8	1	1	5½	21	32	62	28
D660-47	Own 4-71	205	27	Pos			1/16-1/8	1	1	4	21	9	24	28
DF660-47	Own 4-71	205	27	Pos			1/16-1/8	1	1	5½	21	9	24	28
D920-67	Own 6-71	205	27	Pos			1/16-1/8	1	1	5½	26	9	32	39
D930-67	Own 6-71	205	27	Pos			1/16-1/8	1	1	5½	26	21	38	39
DW950-67	Own 6-71	205	27	Pos			1/16-1/8	1	1	5½	26	21	48	39
DW970-67	Own 6-71	205	27	Pos			1/16-1/8	1	1	5½	26	21	56	39
DW980-67	Own 6-71	205	27	Pos			1/16-1/8	1	1	5½	26	21	64	39



● INTERNATIONAL

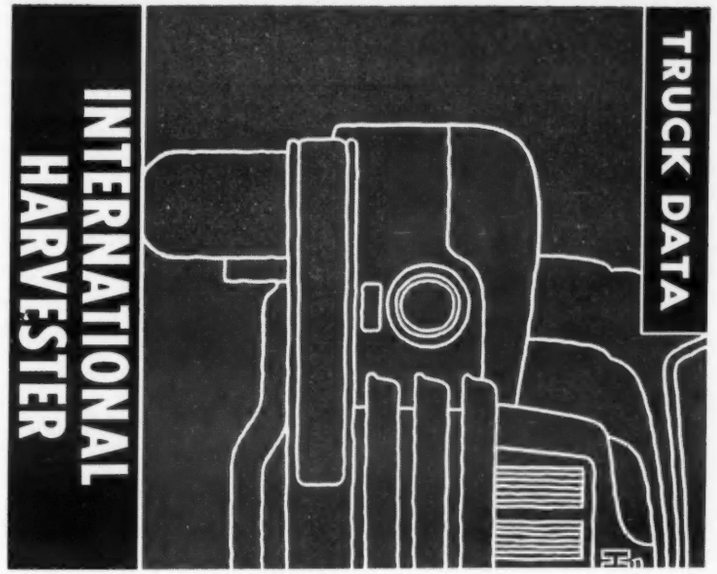
MODEL No.

BATTERY

FRONT END

CAPACITIES

TRUCK	STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	Lubricant: Engine (Qarts)	Lubricant: Transmission (Pints)	Lubricant: Rear Axle (Pints)	Cooling System (Quarts)
R-110, R-120 Series	Own SD-220	105	45	Pos	2	2	1/8–1/4	2	2-3	4	7	3a	4	17
RA-120 Series	Own SD-220	105	45	Pos	2	2	1/8–1/4	2	2-3	4	7			
RM-120 Series	Own SD-220	105	45	Pos	2	2	1/8–1/4	2	2-3	4	7	6	4	17
R-130 Series	Own SD-220	105	45	Pos	2	2	1/8–1/4	2	2-3	4	7	5a	4	17
R-150 Series	Own SD-220	105	45	Pos	2	2	1/8–1/4	1	2-3	4	7	5b	3	18
RM-150 Series	Own SD-220	105	45	Pos	2	2	1/8–1/4	1	2-3	4	7	6	3	17
RA-140	Own SD-240	105	45	Pos	2	2	1/8–1/4	1	2-3	4	7			
R-160, RC-160 Series	Own SD-240	105	45	Pos	2	2	1/8–1/4	1	2-3	4	7	8	8c	18
R-170 Series (except R-174)	Own BD-269	135	57	Pos	2	2	1/8–1/4	1	2-3	4	7	8d	8c	21
R-174	Own BD-269	135	57	Pos	2	2	1/8–1/4	1	2-3	4	7	8d	11e	21
RF-170	Own BD-282						1/8–1/4	1	2-3	4	7	8d	8c	21
R-180, RC-180 Series (except R-184, R-185)	Own BD-282						1/8–1/4	1	2-3	4	7	12	11e	21
R-184	Own BD-282						1/8–1/4	1	2-3	4	7	12	20f	21
R-185	Own RD-372	152	57	Pos	4	4	1/8–1/4	1	2-3	4	9	12g	20	28
R-190 Series (except R-194)	Own RD-372	152	57	Pos	4	4	1/8–1/4	1	2-3	4	9	19	20f	28
R-194, R-200 Series (except R-204, R-205)	Own RD-372, RD-406	152	57	Pos	4	4	1/8–1/4	1	2-3	4	9	19	18f	28
RF-190 Series	Own RD-406	152	57	Pos	4	4	1/8–1/4	4	2-3	4	9	19	12	28
R-204	Own RD-406	152	57	Pos	4	4	1/8–1/4	1	2-3	4	9	19	38h	28
R-205	Own RD-406	152	57	Pos	4	4	1/8–1/4	1	2-3	4	9	24	18f	28
R-210 Series	Own RD-450	152	57	Pos	4	4	1/8–1/4	1	2-3	4	9	24	38h	28
RF-210 Series	Own RD-450	152	57	Pos	4	4	1/8–1/4	1	2-3	4	9	24	11	28



MODEL No.

LUBRICATION

TRUCK	STANDARD ENGINE	Engine: Viscosity and Temperature Range			Transmission: Summer	Transmission: Winter	Rear Axle: Summer	Rear Axle: Winter	Steering Gear: Summer	Steering Gear: Winter	Universal Joints
R-110, R-120, R-130, R-150, RA-120, RM-120, RM-150, R-160, RC-160, RA-140 Series	Own SD-220, SD-240	30 above 32°p	20W @ 10° to 32°	10W below 10°	140q	90	140q	90			
R-170, RF-170, R-180, RC-180, R-190, RF-190, R-200, R-210, RF-210	Own BD-269, BD-282, RD-372, RD-406, RD-450	40 above 32°r	20W @ 10° to 32°	10W below 10°	140q	90	140q	90			

MODEL No.

TUNE UP

VALVE SPRINGS

TENSIONS

TRUCK	STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Intake Valve Opens B-Before A-After: Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted): Intake	Operating Tappet Clearance (Hot unless noted): Exhaust	Spark Plug: Make	Spark Plug: Type	Spark Plug: Size	Spark Plug: Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Valve Open: Average Pressure (Lb.)	Valve Open: Length (In.)	Valve Closed: Average Pressure (Lb.)	Valve Closed: Length (In.)	Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
R-110, R-120, R-130, R-150, RA-120, RM-120, RM-150 Series	Own SD-220	6-3 3/8x3 1/2	15-20l	10B		.023					14mm	.030	.022	2B			145	1.683		2 1/2	85–95	75–85	45–55
R-160, RC-160, RA-140 Series	Own SD-240	6-3 3/8x4 1/2	15-20l	10B		.023					14mm	.030	.022	2B			145	1.683		2 1/2	85–95	75–85	45–55
R-170 Series	Own BD-269	6-3 7/8x4 1/2	15-20l	8B		.023					14mm	.030	n	3B			107	1.668		2 1/2	75–85	100–110	60–70
RF-170, R-180, RC-180 Series (except R-185)	Own BD-282	6-3 1/2x4 1/2	15-20l	12B		.020	.023	.023									186–196	1.468		2.1871			
R-185, R-190 Series	Own RD-372s	6-4 5/8x4 1/2	15-20l	8B		.023			o	o	14mm	.030	n	5B			I. 85 1/2	1.803		2 1/2	100–110	100–110	75–85
RF-190, R-200 Series	Own RD-406s	8-4 5/8x4 1/2	15-20l	8B		.023			o	o	14mm	.030	n	5B			O 137	1.706		2.1			
R-210, RF-210 Series	Own RD-450s	8-4 5/8x5	15-20l	8B		.023			o	o	14mm	.030	n	5B									

l.—Inner. O.—Outer. a—Optional transmission, 6 pt. b—Optional transmission, 8 pt. c—With optional 3 speed axle, 12 pt. d—With optional transmission, 12 pt. CH-J8, AL-AN7. l—Free length. m—AC-45 Com, CH-J8, AL-AN7. n—.018-.024. o—AC-43 Com, CH-J6, AL-AN5. p—For multi-stop service, no sustained high engine purpose gear lubricant. r—For multi-stop service, no sustained high engine speeds. For highway service with sustained high engine speeds, SAE 50; if starting ability will

R-110, R-120, R-130, R-150, RA-120, RM-120, RM-150 Series	Own SD-220	6-3⅞x3½	15-20l	10B	.....	.023				k	k	14mm	.030	.022	2B	.....	.....	145	1.683	.....	2⅛l	85-95	75-85	45-55
R-160, RC-160, RA-140 Series	Own SD-240	6-3⅞x4⅜	15-20l	10B	.....	.023				k	k	14mm	.030	.022	2B	.....	.....	145	1.683	.....	2⅛l	85-95	75-85	45-55
R-170 Series	Own BD-268	6-3⅞x4½	15-20l	5B	.....	.023				m	m	14mm	.030	n	3B	.....	.....	107	1.668	.....	2⅛l	75-85	100-110	60-70
RF-170, R-180, RC-180 Series (except R-185)	Own BD-282	6-3⅛x4½	15-20l	12B	.....	.020	.023	.023		o	o	14mm	.030	n	5B	.....	.....	136-196	1.468	.....	2.1871	100-110	100-110	75-85
R-185, R-190 Series	Own RD-372s	6-4⅝x4½	15-20l	8B	.....	.023				o	o	14mm	.030	n	5B	.....	.....	I. 85½	1.503	.....	2⅛l			
RF-190, R-200 Series	Own RD-406s	6-4⅝x4½	15-20l	8B	.....	.023				o	o	14mm	.030	n	5B	.....	.....	O 137	1.706	.....	2⅛l			
R-210, RF-210 Series	Own RD-450s	6-4½x5	15-20l	8B	.....	.023				o	o	14mm	.030	n	5B	.....	.....							

l.—Inner. O.—Outer. a—Optional transmission, 6 pt. b—Optional transmission, 8 pt. c—With optional 2-speed axle, 13 pt. d—With optional transmission, 12 pt. e—With optional 2-speed axle, 20 pt. f—With optional 2-speed axle, 22 pt. With optional 2-reduction axle, 19 pt. g—Optional transmission F-52 or F-52-C, 19 pt. h—Optional 2-speed axle, 37 pt. l—Minimum at idle. j—.018-.020. k—AC-95 Com, CH-J8, AL-AN7. l—Free length. m—AC-45 Com, CH-J8, AL-AN7. n—.018-.024. o—AC-43 Com, CH-J6, AL-AN5. p—For multi-stop service, no sustained high engine speeds. For highway service with sustained high engine speeds, SAE 40; if starting ability will not permit, use next lower viscosity. q—Use SCL, EP gear oil or multi-purpose gear lubricant. r—For multi-stop service, no sustained high engine speeds. For highway service with sustained high engine speeds, SAE 50; if starting ability will not permit, use next lower viscosity. s—Also available for LP gas operation, in which case this data does not apply.

a—Front axle only. b—Front and intermediate—70, center and rear—59½. c—10 or 10W below 10°. d—Chassis lube.

● LINN

TRUCK	STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After °TC	Intake Valve Opens B-Before A-After Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted) Intake	Operating Tappet Clearance (Hot unless noted) Exhaust	Spark Plug Make	Spark Plug Type	Spark Plug Size	Spark Plug Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Valve Springs: Valve Open Average Pressure (Lb.)	Valve Springs: Valve Open Length (In.)	Valve Springs: Valve Closed Average Pressure (Lb.)	Valve Springs: Valve Closed Length (In.)	Tensions: Cylinder Head (Lb.-Ft.)	Tensions: Main Bearings (Lb.-Ft.)	Tensions: Connecting Rod Bearings (Lb.-Ft.)
A-15, A-25	Her JXE3	6-3½x4¼	26-1600	5B	.....	.006	.008	.010	AL	A5	14mm	.025	.018	4B	.....	.....	58	1.594	43	1.920	82½	b	38½
A-35, A-45	Her JXC	6-3¾x4¼	26-1600	5B	.....	.006	.008	.010	AL	A5	14mm	.025	.018	4B	.....	.....	58	1.594	43	1.920	75	b	52½

MODEL No.

LUBRICATION

TRUCK	STANDARD ENGINE	Engine: Viscosity and Temperature Range			Transmission: Summer	Transmission: Winter	Rear Axle: Summer	Rear Axle: Winter	Steering Gear: Summer	Steering Gear: Winter	Universal Joints
A-15, A-25, A-35, A-45	Her JXE3, JXC	40 above 90°	30 @ 32° to 90°	20 @ 10° to 32°c	140	90	140	90	140	90	d

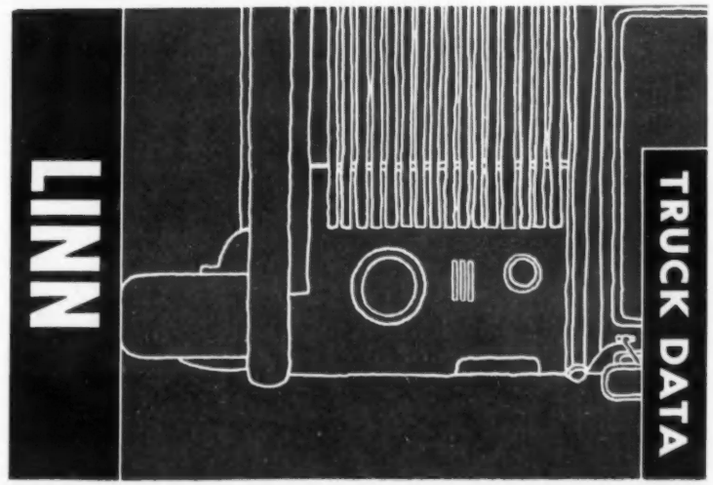
MODEL No.

BATTERY

FRONT END

CAPACITIES

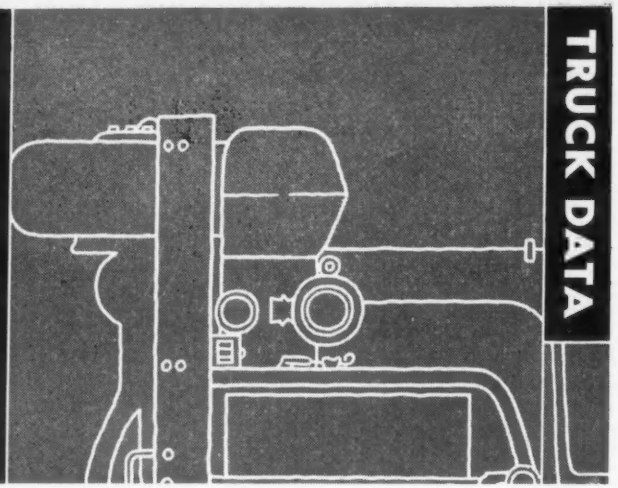
TRUCK	STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	Lubricant: Engine (Quarts)	Lubricant: Transmission (Pints)	Lubricant: Rear Axle (Pints)	Cooling System (Quarts)
A-15, A-25, A-35, A-45	Her JXE3, JXC	135	19	Pos	.....	4	⅛-¼	¾	2	2	6	2½	6s	22



• KENWORTH

TRUCK DATA

KENWORTH



MODEL No.		BATTERY					FRONT END				CAPACITIES			
											Lubricant			
TRUCK	STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	Engine (Quarts)	Trans-mission (Pints)	Rear Axle (Pints)	Cooling System (Quarts)
521, 522	Cum HB600	.....	23a	Pos	.....	.....	1/8±1/32	1	2½-3	5½	20	16b	38	56
523	Cum HB600	.....	23a	Pos	.....	.....	1/8±1/32	1	2½-3	5½	20	16b	.....	56
524, 548, 825	Cum HB600	.....	23a	Pos	.....	.....	1/8±1/32	1	2½-3	5½	20	16b	32c	56
552	Cum HB600	.....	23a	Pos	.....	.....	1/8±1/32	0	4½-6	0	20	16b	26c	56
584	Cum HB600	.....	23a	Pos	.....	.....	1/8±1/32	0	4½-6	0	20	16b	28c	56
585	Le Roi H-540	.....	23d	Pos	.....	.....	1/8±1/32	1	2½-3	5½	.....	24	30	56
829	Wau 140GZ	.....	23d	Pos	.....	.....	1/8±1/32	1	2½-3	5½	10	24b	14c	56
851, 854	Con R-6513	.....	23d	Pos	.....	.....	1/8±1/32	0	4½-7	.....	16	24	26c	62
853	HS 1091-G-1	.....	23d	Pos	.....	.....	1/8±1/32	0	4½-7	.....	21	16	26c	120
888	Cum NHB600	.....	23a	Pos	.....	.....	1/8±1/32	1	1½	0	28	16b	.....	56

MODEL No.		LUBRICATION									
		Engine			Transmission		Rear Axle		Steering Gear		
TRUCK	STANDARD ENGINE	Viscosity and Temperature Range			Summer	Winter	Summer	Winter	Summer	Winter	Universal Joints
521, 522, 548, 552, 584	Cum HB600	30 above 80°	20 @ 20° to 80°	10 below 20°	50k	50k	140m	140m	140	140	140
523, 524, 825	Cum HB600	30 above 80°	20 @ 20° to 80°	10 below 20°	50k	50k	140n	90n	140	140	140
585	Le Roi H-540	40 above 90°	40 @ 32° to 93°	20W @ 0° to 32°p	140q	90q	140m	140m	140	140	140
829	Wau 140GZ	40 @ 70° to 90°	30 @ 50° to 70°	20 or 20W @ 30° to 50°r	50k,s	50k,s	140m	140m	140	140	140
851, 854	Con R6513	40 hot	30 moderate	20 cold	140q	90q	140m	140m	140	140	140
853	HS 1091-G-1	30 above 32°	40 below 32°	40 below 32°	50k	50k	.....	.....	140	140	140
888	Cum NHB600	30 above 80°	20 @ 20° to 80°	10 below 20°	50k	50k	.....	.....	140	140	140

MODEL No.		TUNE UP																VALVE SPRINGS				TENSIONS		
				Intake Valve Opens B-Before A-After			Operating Tappet Clearance (Hot unless noted)		Spark Plug									Valve Open		Valve Closed				
TRUCK	STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	°TC	Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Intake	Exhaust	Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Average Pressure (Lb.)	Length (In.)	Average Pressure (Lb.)	Length (In.)	Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
521, 522, 523, 524, 548, 552, 584, 825	Cum HB600	6-4⅞x6	55-	5B	.....	.....	.014	.022	.....	.....	.....	.....	.....	.....	.....	525	136	2 3/16	87	2 11/16	430-450	310-330	105-115
585	Le Roi H540	8-4½x4¼	40-3200	TDC	.....	.....	.013	.013	.....	J8	14mm	e	.018	5f	.....	g	See	Le Roi	Engines,	page 105	90	95	60
829	Wau 140GZ	6-4⅝x5½	40-2600	15B	.....	.....	.014j	.025	.....	.....	14mm	.025	.020	TC	.....	130	O. 127 I. 70	1 21/32 1 7/16	67 30	2 3/16 1 21/32	175	125-133	95-100
851, 854	Con R6513	6-4½x5⅜	50-60	19B	.....	.....	.020	.024	.....	.....	18mm	.025	.....	.....	.....	120	See Con	tinental	Engines,	page 105			
853	HS 1091-G-1	6-5¾x7	60-1000	10B	.....	.021	.021	.031	.....	.....	18mm	.018	.....	2B	.....	110	See Ha	ll-Scott	Engines,	page 104			
888	Cum NHB600	6-5⅛x6	30-50	20B	.....	.....	.014	.027	.....	.....	.....	.....	.....	.....	.....	525	109	1 27/32	78	2¼	430-450	310-330	105-115

Data Shonn Is for Standard Equipment Only O—Outer. I—Inner. a—4 batteries. b—Auxiliary transmission, 12 pt. c—Each axle. d—2 batteries. e—.025-.030. f—At 500 rpm. g—125-140. j—Cold. k—Straight mineral engine oil for Spicer. Lubricant; Fuller Lubricant, use SAE 140 Summer, SAE 90 winter. m—Hypoid gear lube. n—Straight mineral oil. p—10W below 0°. q—Straight mineral gear oil. r—For 10° to 30°, use 10W. These specifications for light duty. For heavy duty use as follows: 50 at 70° to 90°, 40 at 50° to 70°, 30 at 30° to 50°, 20W at 10° to 30°. s—For auxiliary transmission only.

g—No. 1 transmission standard, No. 2 transmission optional. h—No. 2 transmission standard, No. 1 transmission optional. i—No. 2 transmission standard, No. 3 or No. 4 transmission optional. j—No. 3 or No. 4 transmission. k—⅛ on 17¾ inches.

Model	TRANSMISSIONS	Capacity (pts.)
1. 3-speed Synchro-silent		2¾
4. 5-speed overdrive Synchro-silent		7½

* Optional engine

● MARMON-HER.

TUNE UP

VALVE SPRINGS

TENSIONS

888 .... Cum NHB600	6-5⅛x6	30-50	20B		.014	.027		18mm	.018		2B		110 525	See Ha 109	ll-Scott 1⅓	Engines, 78	page 104 2¼	430-450	310-330	105-115

Data Shonn is for Standard Equipment Only O—Outer. I—Inner. a—4 batteries. b—Auxiliary transmission. 12 pt. c—Each axle. d—2 batteries. e—.025-.030. f—At 500 rpm. g—125-140. i—Cold. k—Straight mineral engine oil for Spicer.

Lubricant: Fuller Lubricant, use SAE 140 Summer, SAE 90 winter. m—Hypoid gear lube. n—Straight mineral oil. p—10W below 0°. q—Straight mineral gear oil. r—For 10° to 30°, use 10W. These specifications for light duty. For heavy duty use as follows: 50 at 70° to 90°, 40 at 50° to 70°, 30 at 30° to 50°, 20W at 10° to 30°. s—For auxiliary transmission only.

g—No. 1 transmission standard, No. 2 transmission optional. h—No. 2 transmission standard, No. 1 transmission optional. i—No. 2 transmission standard, No. 3 or No. 4 transmission optional. j—No. 3 or No. 4 transmission. k—⅛ on 17¾ inches.

Model	TRANSMISSIONS	Capacity (pts.)
1. 3-speed Synchro-silent		2¾
4. 5-speed overdrive Synchro-silent		7½

* Optional engine

MARMON-HER. — TUNE UP — VALVE SPRINGS — TENSIONS

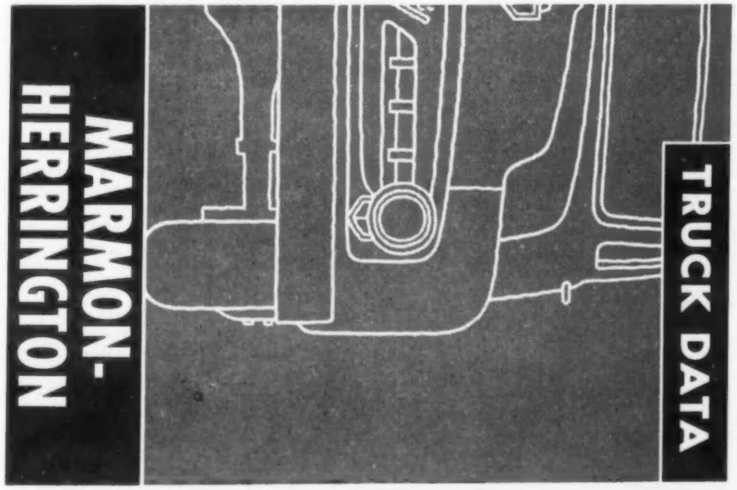
MODEL No.	STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After °TC	Intake Valve Opens Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted) Intake	Exhaust	Spark Plug Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Valve Open Average Pressure (Lb.)	Valve Open Length (In.)	Valve Closed Average Pressure (Lb.)	Valve Closed Length (In.)	Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
6M104, 254, 354, 504; 6PM354, 504; 6BM504, 604	Ford EBR	6-3.62x3.60	45-2000	13B	......	.015	.015	.019	CH	H-9	14mm	a	......	......	......	120	132	1.505	58	1.821	65-75	95-105	45-50
M104, 254, 354, 504, 604*; BM504, 604*; CM504, 604*	Ford EBV	8-3.5x3.1	40-44-4000	8B	......	.019	.016	.018	CH	H-9	14mm	a	......	......	130	130	132	1.505	58	1.821	65-75	80-90	45-50
M604*, 706; BM604*, 704; CM604*, CM704	Ford EBZ	8-3.62x3.10	40-44-4000	15B	......	.016	.016	.018	CH	H-9	14mm	a	......	......	115	115	132	1.505	58	1.821	65-75	80-90	45-50
M754, 756; BM754; CM754, 756	Ford EAL	8-3.56x3.50	40-44-4000	18B	......	.009	.009	.021	CH	H-9	14mm	a	......	......	115	115	140	1.47	67	1.80	80-90	120-130	45-50
M804, 904, 906; CM804, 904, 906	Ford EAM	8-3.80x3.50	40-44-4000	18B	......	.009	.009	.021	CH	H-9	14mm	a	......	......	115	115	140	1.47	67	1.80	80-90	120-130	45-50
MH-610, MH-615	Her WXLC3	See Herc	ules engines,	page	106.																		
MH-620, MH-625	Her RXLC6	See Herc	ules engines,	page	106.																		
MH-630	Her RXLDH6	See Herc	ules engines,	page	106.																		

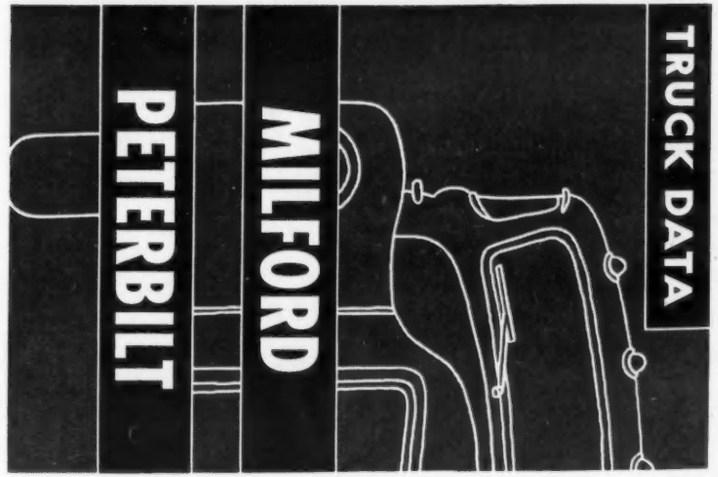
LUBRICATION

TRUCK	STANDARD ENGINE	Engine Viscosity and Temperature Range	Transmission Summer	Transmission Winter	Rear Axle Summer	Rear Axle Winter	Steering Gear Summer	Steering Gear Winter	Universal Joints
All wheel drive	Ford	30 above 32°; 20 or 20W @ 10° to 32°; 10W @ −10° to 10°; 5W below −10°	140	80	90b	90c	90	90	140
Heavy duty (MH6 series)	Hercules	50 above 32°; 40 @ 10° to 32°; 30 below 10°	140	90	140d	90d	140	90	140

BATTERY — FRONT END — CAPACITIES

MODEL No.	STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	Engine (Quarts)	Transmission (Pints)	Rear Axle (Pints)	Cooling System (Quarts)
M104, 6M104	Ford EBV, EBR	90	17	Pos	......	......	1/16e	1	2⅔	8	5m	f	3	22m
M254, 6M254	Ford EBV, EBR	90	17	Pos	......	......	1/16e	0	2½	8	5m	g	4	22m
M354, 6M354	Ford EBV, EBR	90	17	Pos	......	......	1/16e	0	2½	8	5m	g	5	22m
6PM354	Ford EBR	90	17	Pos	......	......	1/16e	0	2½	8	4	h	4	18½
M504, 6M504	Ford EBV, EBR	100	19	Pos	......	......	k	0	2½	0	5m	i	13½	22m
CM504	Ford EBV	100	19	Pos	......	......	k	0	2½	0	5	f	13½	22
6PM504	Ford EBR	100	19	Pos	......	......	k	0	2½	0	4	h	13½	18½
BM504, 6BM504	Ford EBV, EBR	120	17	Pos	......	......	k	0	2½	0	5m	h	13½	22m
M604, BM604, CM604	Ford EBV, EBZ	100	19	Pos	......	......	k	0	2½	0	6	i	15	22½
6BM604	Ford EBR	120	17	Pos	......	......	k	0	2½	0	4	i	15	18½
M704, BM704, CM704, M706, CM706	Ford EBZ	100n	19n	Pos	......	......	k	¾	2	8	6	i	11	22½
M754, BM754, CM754, M756, CM756	Ford EAL	120	17	Pos	......	......	k	¾	2	8	8	j	11	26
M804, CM804, M904, CM904, M906, CM906	Ford EAM	120	17	Pos	......	......	k	¾	2	8	8	j	22	26
MH610	Her WXLC3	166	17	Pos	......	......	1/16–3/16	¾	2½	8	7	12	11	36
MH615	Her WXLC3	166	17	Pos	......	......	1/16–3/16	0	2½	0	7	8	15	36
MH620	Her RXLC6	120	13	Pos	......	......	1/16–3/16	0	2½	0	10	8	15	36
MH625	Her RXLC6	120	13	Pos	......	......	3/16–5/16	0	2½	0	10	12	15	38
MH630	Her RXLDH6	120	13	Pos	......	......	3/16–5/16	0	2½	0	13	12	21	38





• MILFORD & P'BILT

MODEL No. TRUCK	STANDARD ENGINE	BATTERY Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	FRONT END Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	CAPACITIES Lubricant: Engine (Quarts)	Transmission (Pints)	Rear Axle (Pints)	Cooling System (Quarts)
MILFORD														
QX	Wau 6MZA	168	21	Pos	....	....	0–1/8	1	1N	8	8	12	9a	34
QY	Wau 140GK	120	17	Pos	....	....	0–1/8	1	1N	8	10	12	17a	56
PETERBILT														
280, 280 COE	d	152c	19	Pos	4D	....	0–1/8	1	3	5 1/2	20	18	26	60
350, 350 COE	d	152c	19	Pos	4D	....	0–1/8	1	3	5 1/2	20	18	14a	60
360, 360 COE	d	152c	19	Pos	4D	....	0–1/8	1	2	5 1/2	20	18	20a	60
370, 380, 390	d	152c	19	Pos	4D	....	0–1/8	1	1 1/2	8	20	18	20a	60

MODEL No. TRUCK	STANDARD ENGINE	LUBRICATION Engine: Viscosity and Temperature Range			Transmission: Summer	Transmission: Winter	Rear Axle: Summer	Rear Axle: Winter	Steering Gear: Summer	Steering Gear: Winter	Universal Joints
MILFORD											
All Models	Wau 6MZA, 140GK	40 above 50°	30 @ 30° to 50°	20W below 30°	140	90	140	90	140	90	140
PETERBILT											
All Models	d	30 above 90°	20 @ 60° to 90°	10 @ 10° to 60°	140	90	140	90	140	90	140

MODEL No. TRUCK	STANDARD ENGINE	TUNE UP Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted): Intake	Exhaust	Spark Plug: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	VALVE SPRINGS Valve Open: Average Pressure (Lb.)	Length (In.)	Valve Closed: Average Pressure (Lb.)	Length (In.)	TENSIONS Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
MILFORD																								
QX	Wau 6MZA	6-4 1/4x4 3/4	40–1500	8A	.....	.008	.010b	.018b	CH	7 Com	18mm	.025	.018	24B	.....	115	101	1 11/16	64	2 11/16	73–75	96–000	87–89
QY	Wau 140GK	6-4 1/2x5 1/2	40–1500	5A	.....	.....	.010b	.016b	CH	7 Com	18mm	.025	.018	TC	.....	130	(O. 86	1 11/16	31	2 1/16	130–134	130–134	121–125
PETERBILT																	I. 56	1 7/16	26	1 11/16			
All models available with these engines	Cum NH, NHS, NHRS	6-5 1/16x6	See Cummins Engines, page 106																				
	Buda 6DAS-844	6-5 1/16x6 1/2	See Buda Engines, page 104																				
	Hall-Scott 400	6-5 1/16x7	See Hall-Scott Engines, page 104																				

N—Negative. O—Outer. I.—Inner. a—Each axle. b—Cold. c—2 batteries. d—All Models available with Cummins NH, NHS, NHRS, Buda 6DAS-844, Hall Scott 400 engines.

O—Outer. I.—Inner. a—Auxiliary transmission—6 3/4 pt. b—Front axle—15 pts. c—Also front axle. d—Auxiliary transmission—12 pt. e—Auxiliary transmission—17 pt. f—Front axle—25 pt. g—Front axle—24 pt. h—Front axle—36 pt. j—5/8", 35–40; 7/16", 70–75; 1/2", 90–100; 9/16", 130–140; 5/8", 145–155. k—A", 20–25; 5/8", 35–40; 7/16", 70–75; 1/2", 85–95; 9/16", 100–110. n—2 per cylinder; for gasoline, exhaust, No. 6; intake, No. 9; for butane, 4; exhaust, No. 6; intake, No. 8. p—Large, 230–250 lb; small—30–40 lb. q—Cold. r—Long—175 lb ft; short—150 lb ft. s—Straight mineral oil gear lube; same for auxiliary transmission and transfer case. t—Hypoid gear lube, front and rear axle. u—Straight mineral oil gear lube; same for front axle, auxiliary transmission and transfer case. v—Light weight chassis lube. w—Front axle, 11 pts.

• OSHKOSH

TUNE UP

VALVE SPRINGS	TENSIONS

PETERBILT				
All models available with these engines	Cum NH, NHS, NHRS Buda 6DAS-844 HS400	6-5⅛x6 6-5¼x8½ 6-5¾x7	See Cummins Engines, page 106 See Buda Engines, page 104 See Hall-Scott Engines, page 104	

N—Negative. O.—Outer. I.—Inner. s—Each axle. b—Cold: c—2 batteries. d—All Models available with Cummins NH, NHS, NHRS, Buda 6DAS-844, Hall Scott 400 engines.

O—Outer. I.—Inner. a—Auxiliary transmission—6¾ pt. b—Front axle—15 pt. c—Also front axle. d—Auxiliary transmission—12 pt. e—Auxiliary transmission—17 pt. f—Front axle—25 pt. g—Front axle—24 pt. h—Front axle—36 pt. j—5/16", 35-40; 7/16", 70-75; 1/2", 90-100; 9/16", 130-140; 5/8", 145-155. k—5/16", 20-25; 3/8", 35-40; 7/16", 70-75; 1/2", 85-95; 9/16", 100-110. n—2 per cylinder; for gasoline, exhaust, No. 6; intake, No. 9; for butane, 4; exhaust, No. 6; intake, No. 8. p—Large, 230-250 lb; small—30-40 lb. q—Cold. r—Long—175 lb ft; short—150 lb ft. s—Straight mineral oil gear lube; same for auxiliary transmission and transfer case. t—Hypoid gear lube, front and rear axle. u—Straight mineral oil gear lube; same for front axle, auxiliary transmission and transfer case. v—Light weight chassis lube. w—Front axle, 11 pts.

• OSHKOSH

MODEL No. — TUNE UP — VALVE SPRINGS — TENSIONS

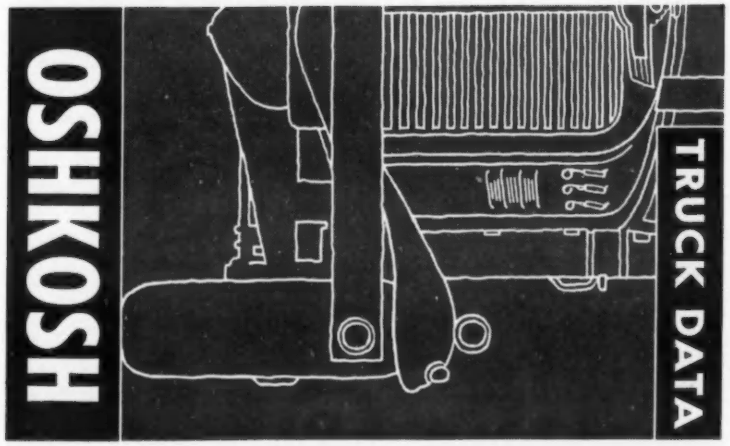
TRUCK	STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After °TC	Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted) Intake	Exhaust	Spark Plug Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Valve Open Average Pressure (Lb.)	Length (In.)	Valve Closed Average Pressure (Lb.)	Length (In.)	Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
W-214, W-314	Con B-6427	0-4 1/16x4 7/8	40-50	16B	......	......	.017	.022	CH	8 Com	18mm	.025	......	......	......	115	144	1.316	69	1.617	j	k	k
W-414	Con T-6427	0-4 1/16x4 7/8	40-60	20B	......	......	.018	.022	CH	8 Com	18mm	.025	......	......	......	115	O. 130 I. 61	1.110 .016	69 29	1.548 1.453	j	k	k
W-712	Her RXLDH	6-4 3/4x5 1/4	36-1600	2A	......	.010	.010	.016	AL	BR-4	18mm	.025	.020	......		......	102	2 5/32	50	2 21/64	80	175	158
W-715	Cum 6-HB	6-4 7/8x6	See Engines,	pages	112-	115.																	
WA-906	Cum HRBB-600	6-5 1/8x6	30-50-2000	5B	......	......	.014	.022	......					......		......	179-198	2 3/16	110-122	2 11/16	See	Cummins,	page 106
WA-1600-CD	Cum HB-600	6-4 7/8x6	30-50-1800	5B	......	......	.014	.022	......					......		......	179-198	2 3/16	110-122	2 11/16			
W-1700, W-2400-6X6	Her RXC	6-4 5/8x5 1/4	26-1600	2A	......	.010	.010	.016	AL	AT-8	14mm	.025	.020	......		......	102	2 5/32	50	2 21/64	80	175	158
W-2206	HS-1091G	6-5 3/4x7	55-1600	10B	......	......	.021	.031	CH	n	18mm	.018	.015	......		......	O. 143 I. 110	2.0 1.9	74 48	2.5 2.4	p	180-200	130-140
WA-2208	Cum NHB-600	6-5 1/8x6	30-50-2100	20B	......	......	.014	.027	......							......	104-114	1 21/32	74-82	2 1/4	See	Cummins,	page 106
W-2209	Cum NHRBS-600	6-5 1/8x6	30-50-2100	55B	......	......	.014	.027	......							......	104-114	1 21/32	74-82	2 1/4			
W-2211	Wau 14S-GKB	6-5 1/4x6	40-2400	15B	6B	......	.013q	.030q	CH	H-9	14mm	.025	.025	.018	......	......	O. 158 I. 100	2 3/8 2 1/16	67 42	2 11/32 2 11/32	r	267-275	67-69

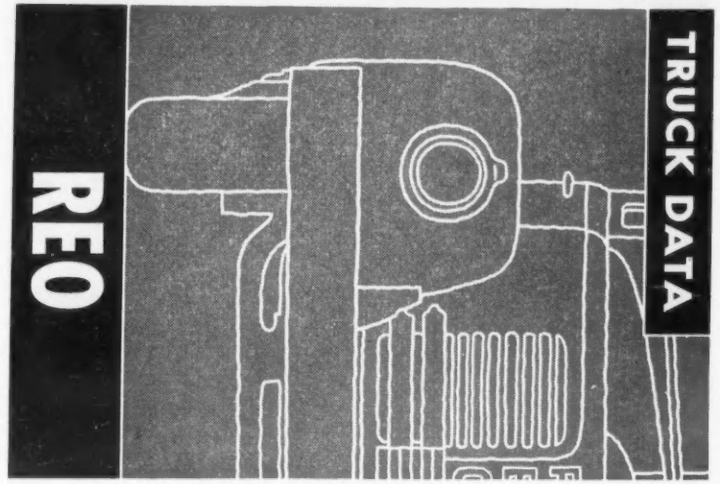
MODEL No. — LUBRICATION

TRUCK	STANDARD ENGINE	Engine: Viscosity and Temperature Range			Transmission Summer	Transmission Winter	Rear Axle Summer	Rear Axle Winter	Steering Gear Summer	Steering Gear Winter	Universal Joints
W-214, W-314, W-414	Con B6427	40 above 50°	20 below 50°	......	140u	90u	140t	90t	140	140	......
W-712, W-712-6X6, W-1700, W-2400-6X6	Her RXLDH, RXC	40 above 40°	30 @ 10° to 40°	20 below 10°	140u	90u	140u	90u	140	140	v
WA-906, WA-1600-CD, WA-2208, W-2209	Cum HRBB-600, HB-600, NHB-600, NHRBS-600	30 above 80°	20 @ 20° to 80°	10 below 20°	140u	90u	140u	90u	140	140	v
WA-1600-BG, W-2211	Buda 6MO-893 Wau 145-GKB	40 above 90°	30 @ 32° to 90°	20 below 32°	140u	90u	140u	90u	140	140	v
W-2206	HS-400	30 above 32°	......	20 below 32°	140u	90u	140u	90u	140	140	v

MODEL No. — BATTERY — FRONT END — CAPACITIES

TRUCK	STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	Engine (Quarts)	Transmission (Pints)	Rear Axle (Pints)	Cooling System (Quarts)
W-214	Con B-6427	153	19	Pos	4H	4H	0-1/8	1	1	3	8	16a	18b	40
W-314	Con B-6427	153	19	Pos	4H	4H	0-1/8	1	1	3	8	16a	21b	40
W-414	Con T-6427	153	19	Pos	4H	4H	0-1/8	1	1	3	8	24a	21w	40
W-712	Her RXLDH	153	19	Pos	4H	4H	0-1/8	1	1	3	13	24a	15c	48
W-712-6X6	Her RXLDH	153	19	Pos	4H	4H	0-1/8	1	1	3	13	24d	32b	48
W-715	Cum 6-HB	204	25	Pos	7D	7D								
WA-906	Cum HRBB-600	204	25	Pos	7D	7D	0-1/8	1/2	1	3	35	22e	24f	42
WA-1600-CD	Cum HB-600	204	25	Pos	7D	7D	0-1/8	1/2	1	3	......	22e	25c	......
W-1700	Her RXC	153	19	Pos	4H	4H	0-1/8	1	1	3	12	24a	25g	46
W-2206	HS 1091G	153	19	Pos	4H	4H	0-1/8	1/2	1	3	16	29d	40h	75
WA-2208	Cum NHB-600	204	25	Pos	7D	7D	0-1/8	1/2	1	3	35	22e	24f	66
W-2209	Cum NHRBS-600	204	25	Pos	7D	7D	0-1/8	1/2	1	3	35	29d	40h	66
W-2211	Wau 145-GKB	153	19	Pos	4H	4H	0-1/8	1/2	1	3	......	22c	24f	......





• REO

TRUCK / STANDARD ENGINE	BATTERY: Amp. Hr. Capacity	BATTERY: Number of Plates	BATTERY: Terminal Grounded	BATTERY: SAE Group No.	BATTERY: AABM Group No.	FRONT END: Toe-in (In.)	FRONT END: Camber (Deg.)	FRONT END: Caster (Deg.)	FRONT END: King Pin Slant (Deg.)	CAPACITIES: Lubricant: Engine (Quarts)	CAPACITIES: Lubricant: Transmission (Pints)	CAPACITIES: Lubricant: Rear Axle (Pints)	CAPACITIES: Cooling System (Quarts)
F-14 ..... SD-240	105	15				1/16–1/8	1	2–3	4	7	8	10	18
F-14R SD-240	105	15				1/16–1/8	1	2–3	4	7	8	15b	18
F-20, F-120F ..... Own OA-285	136	17	Pos		3	0–1/8	1	2	8	8	8	a,b	20
F-22, F-122F ..... Own OA-292, OA-331	136	17	Pos		3	0–1/8	1	2	8	8	11	a,b	24
F-22R ..... Own OA-331	136	17	Pos		3	0–1/8	1	d	d	8	11	a,b	24
F-22S ..... Own OA-331	153g	19g	Pos		4g	0–1/8	1	1½	5½	8	11	a,b	24
F-23, F-23T ..... Con T-6427	153g	19g	Pos		4g	0–1/8	1	1½	5½	9	18	a,b	27
F-23D ..... Buda 6DTS-468, Cum JBS-600	c.f.	c.f.	Pos			0–1/8	1	1½	5½	e	18	a,b	28
F-120 ..... Own OA-255, OA-292	136	17	Pos		3	0–1/8	1	2	8	8	h	a,b	20j
F-122 ..... Own OA-292, OA-331	136	17	Pos		3	0–1/8	1	2	8	8	h	a,b	24
F-226, F-226M ..... Own OA-331	136	17	Pos		3	0–1/8k	1	1½k	5½	8	m	n	24
F-236 ..... Con T-6427	136p	17f	Pos		3p	0–1/8	1	1½	5½	9	m	31q	27
F-236D ..... Cum JBS-600, Buda 6DTS-468	c.f.	c.f.	Pos			0–1/8	1	1½	5½	e	m	31q	28
F-50 ..... OH-160	153	19				0–1/8	1	1½	5½	8	18	31	26
F-506 ..... OH-160	136	17				1/16–1/8	1	1½	5½	8	18		26
F-536M OH-160	153	19				1/16–1/8	3	2–3	4	8	18	n	26

MODEL No. / TRUCK / STANDARD ENGINE	LUBRICATION: Engine: Viscosity and Temperature Range			Transmission: Summer	Transmission: Winter	Rear Axle: Summer	Rear Axle: Winter	Steering Gear: Summer	Steering Gear: Winter	Universal Joints
F-20, F-22, F-22R, F-22S, F-120, F-122, F-226, F-226M ..... Own OA-255, OA-292, OA-331	30 above 32°	20W @ 20° to 32°	10W @ −10° to 20°	w	w	x	x	90y	90y	z
F-23, F-23T, F-236 ..... Con T-6427	40 above 32°	30 @ 20° to 32°	10W below 20°	w	w	x	x	90y	90y	z

MODEL No. / TRUCK / STANDARD ENGINE	TUNE UP: Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Intake Valve Opens B-Before A-After: Flywheel Teeth° TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted): Intake	Operating Tappet Clearance (Hot unless noted): Exhaust	Spark Plug: Make	Spark Plug: Type	Spark Plug: Size	Spark Plug: Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-wheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	VALVE SPRINGS: Valve Open: Average Pressure (Lb.)	VALVE SPRINGS: Valve Open: Length (In.)	VALVE SPRINGS: Valve Closed: Average Pressure (Lb.)	VALVE SPRINGS: Valve Closed: Length (In.)	TENSIONS: Cylinder Head (Lb.-Ft.)	TENSIONS: Main Bearings (Lb.-Ft.)	TENSIONS: Connecting Rod Bearings (Lb.-Ft.)
F-14, F-14R IH-SD-240	6–3 3/16x4 1/4	40–45–1200	10B			.018–.020	.024–.025	CH	J6	14mm	.031	.021	2B			149–158	1 1/16	86–94	2 1/2	85–95	75–85	45–55
Models using ..... Own OA-255	6–3 5/16x4 1/2	40–2000r	5B			.015	.015	CH	J6	14mm	.025	.022	8B			178–188	1.360	64–70	1.780	100–105	85–90	65–70
Models using ..... Own OA-292	6–3 7/16x4 1/2	40–2000r	5B			.015	.015	CH	J6	14mm	.025	.022	4B			178–188	1.360	64–70	1.780	100–105	85–90	65–70
Models using ..... Own OA-331	6–4 1/16x4 1/2	40–2000r	5B			.015	.015	CH	J6	14mm	.025	.022	2B			178–188	1.360	64–70	1.780	100–105	85–90	65–70
Models using ..... Own OH-160	6–4 1/16x4 1/2	40–2000r	20B			.020	.020	CH	J6	14mm	.025	.022	5B			178–188	1.360	64–70	1.780	100–105	85–90	65–70
Models using ..... Own OA-255-lpg		40–2000r	5B			.015		CH	J7	14mm	.020	.022	6B			(In 179	1.360	64–70	1.780	100–105	85–90	65–70
Models using ..... Own OA-331-lpg		40–2000r	5B			.015		CH	J6	14mm	.020	.022	6B			Ex 181	1.103	67	1.583	100–105	85–90	65–70
Models using ..... Con T-6427	6–4 3/16x4 7/8	40–60–2600	20B		.021	.017	.022	CH	8	18mm	.025		10B	B	u	O. 130 / I. 61		65–73 / 26–32		130–140	85–95	75–85

For Diesel Models, See Engines, pages 105–108.

O.—Outer. I.—Inner. a—When new or reconditioned carrier is reinstalled, add a pt to pinion cage. b—Optional axle capacities as follows: Timken E-100, 15 pt; E-300, 13 pt; H-100, 20 pt; H-200, 28 pt; H-300, 26 pt; L-100, 23 pt; L-200, 31 pt; L-300, 29 pt; Q-100, 31 pt; Q-200, 54 pt; Q-300, 52 pt; R-100, 30 pt; R-200 36 pt; R-300, 34 pt. c—270 amp hr capacity, 39 plates; 315 amp hr capacity, 45 plates; 2 batteries. d—With Timken 32500, caster, 2°, king pin slant 8°; with FD-900—caster 1½°, king pin slant 5½°. e—With Cum JBS-600—12 qt. with Buda 6DTS-468—9.5 qt. f—With Buda 6DTS-468—201 amp hr capacity, 29 plates, 2 batteries. g—With Model Nos. F-22ST and F-23T—200 amp hr capacity, 23 plate. h—With Warner T98 transmission—8 pt. with Clark 205-V—11 pt. with Clark 231-F—10 pt. j—With OA-292 engine—24 qt. k—Model No. F-226M—toe-in—3/16-1/8", caster—3°. m—With Clark transmission 205-V—11 pt, Clark 290V—18 pt, Spicer auxiliary 6231, 6231A, 6231B—8 pt, Timken torque divider T-70—17 pt. n—With Timken SFD-157—9 pt each axle. SBD-1555—22 pt each axle. p—As shown. 2 batteries; also available 153 amp hr capacity, 19 plate, AABM Group No. 4, 1 battery. q—Each axle. r—Minimum. u—125-135. v—Below −10° use 5W. w—Above 32°—SAE 140 gear lube, below 32°—SAE 50 heavy duty gear lube; auxiliary transmissions—above 0° use SAE 90 heavy duty gear lube, below 0° use SAE 50 heavy duty gear lube. x—All Timken E,H,L, Q, R series axles—above 0° use SAE 140 heavy gear lube, below 0° use SAE 90 heavy gear lube; for tandem axles above 0° use SAE 140 gear lube, below 0° 140 gear lube. y—Gear lube. z—Chassis lube; for center bearings use wheel bearing grease.

a—With overdrive, 3.4 pt.; with 4-speed Synchromesh transmission, 8 pt. b—Optional, 13½ qt. c—Optional, 16 qt. d—With 4-speed Synchromesh transmission, 8 pt. e—With HD transmission, 6 pt.; with 4-speed Synchromesh transmission, 8 pt. f—With HD single speed, 18½ pt.; with 2-speed, 14 pt. g—With 2-speed, 14 pt. j—Cold. k—Exhaust Rotovalve spring: 120–130 lb., free length, 2⅛ in.; length under load, 1½ in. m—If equipped with overdrive, 90 mineral gear lube or 40 engine oil. n—Truck type hypoid lube. p—Chassis lube, low pressure gun. q—Below 32° only. r—For optional HD single speed and optional 2-speed rear axle use 90 hypoid type truck lube below 32° and 140 hypoid type truck lube above 32°. s—3R28, 3R38—Std. 20.25, HD 20.75.

• STUDEBAKER

TUNE UP	VALVE SPRINGS	TENSIONS

a pt to pinion cage. b—Optional axle capacities as follows: Timken E-100, 15 pt; E-300, 13 pt; H-100, 20 pt; H-200, 28 pt; H-300, 26 pt; L-100, 23 pt; L-200, 31 pt; L-300, 29 pt; Q-100, 31 pt; Q-200, 54 pt; Q-300, 52 pt; R-100, 30 pt; R-200 56 pt; R-300, 34 pt. c—270 amp hr capacity, 39 plates; 315 amp hr capacity, 45 plates; 2 batteries. d—With Timken 32500, caster, 2°, king pin slant 8°; with FD-900—caster 1½°, king pin slant 5½°. e—With Cum JBS-600—12 qt, with Buda 6DTS-468—With Model Nos. F-22ST and F-23T—200 amp hr capacity, 23 plate. h—With Warner T98 transmission—8 pt, with Clark 205-V—11 pt, with Clark 231-F—10 pt. j—With OA-292 engine—24 qt. k—Model No. F-226M—toe-in—⅛-¼", caster—3°. m—With Clark transmission 205-V—11 pt, Clark 290V—18 pt, Spicer auxiliary 6231, 6231A, 6231B—8 pt, Timken torque divider T-70—17 pt. n—With Timken SFD-157—9 pt each axle, SBD-1555—22 pt each axle. p—As shown, 2 batteries; also available 153 amp hr capacity, 19 plate, SAEM Group No. 4, 1 battery. q—Each axle. r—Minimum. u—125-135. v—Below −10° use 5W. w—Above 32°—SAE 140 gear lube, below 32°—SAE 50 heavy duty gear lube; auxiliary transmission—above 0° use SAE 90 heavy duty gear lube, below 0° use SAE 50 heavy duty gear lube. x—All Timken E,H,L, Q, R series axles—above 0° use SAE 140 heavy gear lube, below 0° use SAE 90 heavy gear lube; for tandem axles above 0° use SAE 140 gear lube, below 0° 140 gear lube. y—Gear lube. z—Chassis lube; for center bearings use wheel bearing grease.

a—With overdrive, 3.4 pt.; with 4-speed Synchromesh transmission, 8 pt. b—Optional, 13½ qt. c—Optional, 16 qt. d—With 4-speed Synchromesh transmission, 8 pt. e—With HD transmission, 6 pt.; with 4-speed Synchromesh transmission, 8 pt. f—With HD single speed, 18½ pt.; with 2-speed, 14 pt. g—With 2-speed, 14 pt. j—Cold. k—Exhaust Rotovalve spring: 120-130 lb., free length, 2⅛ in.; length under load, 1½ in. m—If equipped with overdrive, 90 mineral gear lube or 40 engine oil. n—Truck type hypoid lube. p—Chassis lube, low pressure gun. q—Below 32° only. r—For optional HD single speed and optional 2-speed rear axle use 90 hypoid type truck lube below 32° and 140 hypoid type truck lube above 32°. s—3R28, 3R38—Std. 20.25, HD 20.75.

● STUDEBAKER

TUNE UP

MODEL No. / TRUCK	STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted): Intake	Exhaust	Spark Plug: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed
3R5, 3R10, 3R15	Own 1R, 2R	6-3x4	40-2000	15B	5B	.020	.016j	.016j	CH	J7	14mm	.033	.020	2B	¾	150
3R6, 3R11, 3R14, 3R16, 3R17	Own 6R, 4R	6-3 1/16x4 3/16	40-2000	15B	5½B	.020	.016j	.016j	CH	J7	14mm	.033	.022	2B	¾	140
3R28, 3R38	Own VT	8-3 1/16x3 1/4	40-2000	11B	4B	.030	.023	.023	CH	H10	14mm	.038	.018	4B	1½	150

VALVE SPRINGS

MODEL No. / TRUCK	STANDARD ENGINE	Valve Open: Average Pressure (Lb.)	Valve Open: Length (In.)	Valve Closed: Average Pressure (Lb.)	Valve Closed: Length (In.)
3R5, 3R10, 3R15	Own 1R, 2R	93-103	1 5/8	49-54	1 31/32
3R6, 3R11, 3R14, 3R16, 3R17	Own 6R, 4R	125-135	1¾	54-60	2 1/32
		3R17Exh:			
		125-135	1 5/8	54-60	1 31/32
3R28, 3R38	Own VT	105-115	1 13/16	45-55	2 1/32
		106-116	1 13/16	45-55	1 31/32

TENSIONS

MODEL No. / TRUCK	STANDARD ENGINE	Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
3R5, 3R10, 3R15	Own 1R, 2R	46-50	88-93	28-32
3R6, 3R11, 3R14, 3R16, 3R17	Own 6R, 4R	80-85	88-93	52-54
3R28, 3R38	Own VT	46-50	88-93	52-54

LUBRICATION

MODEL No. / TRUCK	STANDARD ENGINE	Engine: Viscosity and Temperature Range	Transmission: Summer	Transmission: Winter	Rear Axle: Summer	Rear Axle: Winter	Steering Gear: Summer	Steering Gear: Winter	Universal Joints
3R5, 3R6	Own 1R, 6R	30 above 32° 5W @ below −10° — 20 @ 10° to 32° — 10 @ 10° to −10°	90m	90m	90n	90n	140	140	p
3R10, 3R11	Own 1R, 6R	30 above 32° 5W @ below −10° — 20 @ 10° to 32° — 10 @ 10° to −10°	90m	90m	140	90q	140	140	p
3R14, 3R15	Own 2R, 6R	30 above 32° 5W @ below −10° — 20 @ 10° to 32° — 10 @ 10° to −10°	140	90q	140n	90nq	140	140	p
3R16, 3R28	Own 4R, VT	30 above 32° 5W @ below −10° — 20 @ 10° to 32° — 10 @ 10° to −10°	140	90q	140r	90qr	140	140	p
3R17, 3R38	Own 4R, VT	30 above 32° 5W @ below −10° — 20 @ 10° to 32° — 10 @ 10° to −10°	140	90q	140nr	90nr	140	140	p

BATTERY

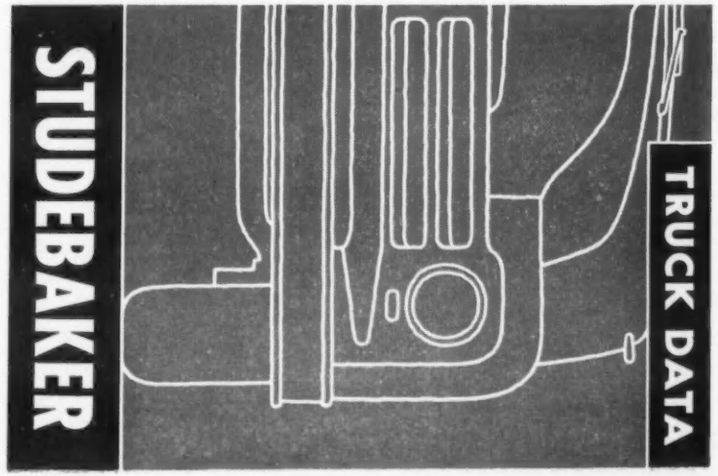
MODEL No. / TRUCK	STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.
3R5, 3R10	Own 1R	100	15	Pos	1M	1
3R6, 3R11	Own 6R	100	15	Pos	1M	1
3R14	Own 6R	100	15	Pos	1M	1
3R15	Own 2R	100	15	Pos	1M	1
3R16, 3R28	Own 4R, VT	100	15	Pos	1M	1
3R17A, 3R38	Own 4R, VT	100	15	Pos	1M	1

FRONT END

MODEL No. / TRUCK	STANDARD ENGINE	Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)
3R5, 3R10	Own 1R	1/16–1/8	1	1¼–1¾	7½
3R6, 3R11	Own 6R	1/16–1/8	1	1¼–1¾	7½
3R14	Own 6R	1/16–1/8	1	1¾x2¼	8
3R15	Own 2R	1/16–1/8	1	1¾–2¼	8
3R16, 3R28	Own 4R, VT	1/16–1/8	1	2–2½	8
3R17A, 3R38	Own 4R, VT	1/16–1/8	1	2–2½	8

CAPACITIES

MODEL No. / TRUCK	STANDARD ENGINE	Lubricant: Engine (Quarts)	Lubricant: Transmission (Pints)	Lubricant: Rear Axle (Pints)	Cooling System (Quarts)
3R5, 3R10	Own 1R	5	2½a	3	10½b
3R6, 3R11	Own 6R	6	2½a	3	15½c
3R14	Own 6R	6	6e	5	15½c
3R15	Own 2R	5	6e	5	10½b
3R16, 3R28	Own 4R, VT	6	6d	7f	15½ca
3R17A, 3R38	Own 4R, VT	6	8	18½g	15½ca



TRUCK DATA

WALTER

WILLYS

• WALTER & WILLYS

MODEL No.		BATTERY					FRONT END				CAPACITIES			
											Lubricant			
TRUCK	STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	Engine (Quarts)	Trans-mission (Pints)	Rear Axle (Pints)	Cooling System (Quarts)
WALTER														
FZM	Wau 6ZMA	120a	15	Pos	.....	2D	1/16N	1½	5	2	8	26	5	34
AEB	Wau 140GZ	120a	15	Pos	.....	2D	1/16N	1½	5	2	10	33	7	58
ARB	Le Roi H-540	150a	17	Pos	.....	4D	1/16N	1½	5	2	12	33	7	58
AGB, AGR	Wau 145GK	150a	17	Pos	.....	4D	1/16N	1½	5	2	18	33	7	68
AGB, AGR	Wau 145GKB	150a	17	Pos	.....	4D	1/16N	1½	5	2	18	33	7	68
WILLYS														
CJ-3B	Own 4FB	100	15	Neg	I-H	.....	3/64–3/32	1½	3	7½	4	6½*	5¼**	11
475-4WD	Own 4FB	100	15	Neg	IM	.....	3/64–3/32	1½	3	7½	4	6½*	5½**	11
6226-4WD	Kaiser 6226	100	15	Neg	I-H	.....	3/64–3/32	1½	3	7½	5	6½*	5½**	11½

MODEL No.		LUBRICATION									
		Engine			Transmission		Rear Axle		Steering Gear		Universal Joints
TRUCK	STANDARD ENGINE	Viscosity and Temperature Range			Summer	Winter	Summer	Winter	Summer	Winter	
WALTER All models		50 summer	30 winter	.....	140E.P.	140E.P.	140E.P	140E.P.j	j140E.P.j	140E.P.	J
WILLYS All models	Own 4FB, Kaiser 6-226	30 above 90°	20-20W @ 32° to 90°	10W @ 10° to 32°e	90	80	90E.P.	90E.P.	140	140	f

MODEL No.		TUNE UP															VALVE SPRINGS				TENSIONS		
				Intake Valve Opens B-Before A-After			Operating Tappet Clearance (Hot unless noted)		Spark Plug								Valve Open		Valve Closed				
TRUCK	STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	°TC	Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Intake	Exhaust	Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-wheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Average Pressure (Lb.)	Length (In.)	Average Pressure (Lb.)	Length (In.)	Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
WALTER																							
FZM	Wau 6MZA	6-4¼x4¾	40-1500	8B	3B	.008	.009b	.019b	Opt	.....	18mm	.025	.018	Var	.....	110	101	1 31/32	64	2 11/32	73-75	96-100	67-69
AEB	Wau 140GZ	6-4⅝x5½	40h	15B	5B	.....	.013b	.025b	Opt	.....	Opt	.025	.018	Var	Var	.....	O. 127	1 31/32	67	2 1/16	175	129-133	96-100
																	I. 70	1 7/16	30	1 31/32			
ARB	Le Roi H-540	8-4½x4¼	45-.....	TC	.....	.....	.013	.013	CH	J8	14mm	.027	.018	35b†	.....	130	106	1.6	53	2.0	90	95	60
AGB, AGR	Wau 145GK	6-5¼x6	40-1500	5A	2A	.006	.010b	.025b	.....	.....	18mm	.025	.018	.....	.....	130	O. 158	2⅝	67	2 11/32	130-134	242-250	73-75
																	I. 100	2 1/16	42	2 11/32			
AGB, AGR	Wau 145GKB	6-5¼x6	40h	15B	6B	.....	.013b	.024b	Opt	.....	Opt	.025	.018	Var	Var	.....	O. 158	2⅝	67	2 11/32	175 Long	267-275	67-69
																	I. 100	2 1/16	42	2 11/32	150 Short		
WILLYS																							
CJ-3B, 475-4WD	Own 4FB	4-3⅛x4⅜	20-2300	9B	3.22	.026	.016	.016	CH	J8	14mm	.030	.020	5B	1.79	125	c 153	1.4	73	1.66	70	65-75	35-40
																	d 120	1.75	53	2.109			
6226-4WD	Kaiser 6-226	6-3 5/16x4⅜	35-1700	10B	3.25	.018	.014	.014	CH	J8	14mm	.030	.020	4B	1.80	120	c 118	1.312	51	1.672	70	65-75	35-40
																	d 118	1.312	51	1.672			

N—Negative. I.—Inner. O.—Outer. a—12 volt. b—Cold. c—Intake. d—Exhaust. [illegible] mer, No. 1; winter, No. 0. g—Marfak No. 2. h—At governed speed. *—Includes [illegible]

O.—Outer. I.—Inner. a—2 batteries. b—Add one qt for filter. c—Auxiliary transmission with tandem axles—13 pt. d—Tandem axle models have following capacity for each axle: Model Nos. ending in T2—14 pt; T4—17 pt; T7—32 pt; T8—26 pt; F—38 pt; G—34 pt; H—38 pt. e—Add 4 qt for filter. f—4 batteries. g—Auxiliary transmission with tandem axles—12 pt.

• WARD-LAFRANCE

TUNE UP | VALVE SPRINGS | TENSIONS

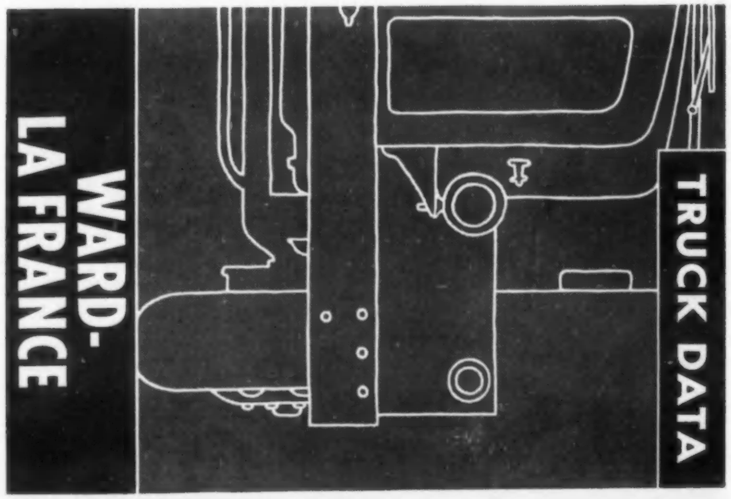
O.—Outer. I.—Inner. a—2 batteries. b—Add one qt for filter. c—Auxiliary transmission with tandem axles—13 pt. d—Tandem axle models have following capacity for each axle: Model Nos. ending in T2—14 pt; T4—17 pt; T7—32 pt; T8—26 pt; F—38 pt; G—34 pt; H—38 pt. e—Add 4 qt for filter. f—4 batteries. g—Auxiliary transmission with tandem axles—12 pt.

WARD-LAFRANCE

MODEL No.		TUNE UP															VALVE SPRINGS				TENSIONS		
				Intake Valve Opens B-Before A-After			Operating Tappet Clearance (Hot unless noted)		Spark Plug								Valve Open		Valve Closed				
TRUCK	STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	°TC	Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Intake	Exhaust	Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Average Pressure (Lb.)	Length (In.)	Average Pressure (Lb.)	Length (In.)	Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
D-1, D-1C	Con T-6427	6-4 5/16x4 7/8	40-60	16B	......	.022	.017	.017	CH	......	......	.025	......	......	......	......	I. 57 O. 129	1.408	12.8 71	1 7/8	See Continental, page 105.		
D-3	Con R-6572	6-4 3/4x5 3/8	50-60	12B	......	.0245	.020	.020	CH	......	......	.025	.020	5B	......	120	I. 85 O. 165	1 3/4	35 70	2 1/4	See Continental, page 105.		
D-3S	Con R-6602	6-4 7/8x5 3/8	50-60	12B	......	.0245	.020	.020	CH	......	......	.025	.020	5B	......	120							
D-5	Cum HB-600	6-4 7/8x6	30-50	5B	......	......	.014	.022	......	......	......	......	......	......	......	......	I. 129 O. 143	2 1/16	83 91	2 11/16	See Cummins, page 106.		
D-5R	Cum HRB-600	6-5 1/8x6	......	5B	......	......	.014	.022	......	......	......	......	......	......	......	......							
D-5N	Cum NHB-600	6-5 1/8x6	30-50	20B	......	......	.014	.027	......	......	......	......	......	......	......	......	I. 104 O. 114	1 11/32	74 82	2 1/4	See Cummins, page 106.		
D-5RB	Cum HRBB	6-5 1/8x6	......	77B	......	......	.016	.028	......	......	......	......	......	......	......	......	See Cummins Engine, page 106						

MODEL No.		LUBRICATION									
		Engine			Transmission		Rear Axle		Steering Gear		Universal Joints
TRUCK	STANDARD ENGINE	Viscosity and Temperature Range			Summer	Winter	Summer	Winter	Summer	Winter	
D-1, D-1C, D-3, D-3S	Con T-6427, R-6572, R-6602	40 summer	20 or 10 winter	....	140	90	140	90	140	140	....
D-5, D-5N, D-5R, D-5RB	Cum HB-600, HRB-600, NHB-600, HRBB	30 @ 80° to 100°	20 @ 20° to 80°	10 below 20°	140	90	140	90	140	140	....

MODEL No.		BATTERY					FRONT END				CAPACITIES			
											Lubricant			
TRUCK	STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	Engine (Quarts)	Trans-mission (Pints)	Rear Axle (Pints)	Cooling System (Quarts)
D-1	Con T-6427	152a	19	Pos	......	......	1/8±1/16	3/4-1 1/2	1/2-1 1/2	8	8b	16c	31d	36
D-3, D-3S	Con R-6572, R-6602	152a	19	Pos	......	......	1/8±1/16	3/4-1 1/2	1/2-1 1/2	8	14e	24c	38d	60
D-5	Cum HB-600	152f	19	Pos	......	......	1/8±1/16	3/4-1 1/2	1/2-1 1/2	8	20	24g	38d	56
D-5N, D-5R, D-5RB	Cum NHB-600, HRB-600, HRBB	152f	19	Pos	......	......	1/8±1/16	3/4-1 1/2	1/2-1 1/2	8	28	24g	38d	56



MODEL No.	STANDARD ENGINE	BATTERY: Amp. Hr. Capacity	BATTERY: Number of Plates	BATTERY: Terminal Grounded	BATTERY: SAE Group No.	BATTERY: AABM Group No.	FRONT END: Toe-in (In.)	FRONT END: Camber (Deg.)	FRONT END: Caster (Deg.)	FRONT END: King Pin Slant (Deg.)	CAPACITIES: Lubricant: Engine (Quarts)	CAPACITIES: Lubricant: Transmission (Pints)	CAPACITIES: Lubricant: Rear Axle (Pints)	CAPACITIES: Cooling System (Quarts)
WHITE**														
WC-16	Own 116A	a	b	Pos				1	2° 50′	8	12	6	22	30
WC-20	Own 130A	a	b	Pos				1	2° 50′	8	12	13	11	30
WC-22PLT	Own 150A	a	b	Pos				1	2° 50′	8° 30′	12	16	8	30
WC-2264	Own 150A	a	b	Pos				1	2° 50′	8° 50′	12	16	22c	30
WC-28T	Own 290A	d	b	Pos				1	2° 50′	8° 30′	15	24	22	38
WC-2864	Own 290A	d	b	Pos				1	2° 50′	8° 30′	15	24	14c	38
3016	Own 116A	a	b	Pos				1	2° 50′	6	10	6	22	28
3020	Own 130A	a	b	Pos				1	2° 50′	6	10	13	11	28
3022, 3026	Own 140A, 150A	a	b	Pos				1	2° 50′	6	10	16	22	28
3022PLT	Own 150A	a	b	Pos				1	2° 50′	6	10	16	8	28
WHITE FREIGHTLINER														
WF64TL, WF-64, WF-62P, WF-42, WF-64H, WF-64T	Cum NHB600	152	19	Pos	4		$\frac{3}{16}$	1	$2\frac{3}{4}$	8	p	16k	m	58

MODEL No.	STANDARD ENGINE	LUBRICATION: Engine: Viscosity and Temperature Range			LUBRICATION: Transmission: Summer	LUBRICATION: Transmission: Winter	LUBRICATION: Rear Axle: Summer	LUBRICATION: Rear Axle: Winter	LUBRICATION: Steering Gear: Summer	LUBRICATION: Steering Gear: Winter	LUBRICATION: Universal Joints
WHITE**											
WC-16, WC-20, WC-22PLT, 3020, 3022, 3022PLT, 3026	Own 116A, 130A, 140A, 150A	30 summer	20 winter		90g	90g	90h	90h			140g
WC-2264, 3016	Own 150A, 116A	30 summer	20 winter		90g	90g	140g	140g			140g
WC-28T	Own 290A	30 summer	20 winter		90g	90g	90g	90g			140g
WC-2864	Own 290A	30 summer	20 winter		90g	90g	140g	90g			140g
WHITE FREIGHTLINER											
WF-64, WF-42	Cum NHB600	30 summer	30 winter		90	90	90	90	90	90	90
WF-64T, WF-64H	Cum NHB600	30 summer	30 winter		140q	90q	140	90	90	90	90
WF-64TL, WF-64	Cum NHB600	30 summer	30 winter		50r	50r	140	90	90	90	90
WF-42, WF-62P	Cum NHB600	30 summer	30 winter		140	90	140	90	90	90	90

MODEL No.	STANDARD ENGINE	TUNE UP: Number of Cylinders, Bore and Stroke	TUNE UP: Normal Oil Pressure Lb. at M.P.H. or R.P.M.	TUNE UP: Intake Valve Opens B-Before A-After: °TC	TUNE UP: Intake Valve Opens B-Before A-After: Flywheel °TC	TUNE UP: Intake Tappet Clearance for Valve Timing	TUNE UP: Operating Tappet Clearance (Hot unless noted): Intake	TUNE UP: Operating Tappet Clearance (Hot unless noted): Exhaust	TUNE UP: Spark Plug: Make	TUNE UP: Spark Plug: Type	TUNE UP: Spark Plug: Size	TUNE UP: Spark Plug: Gap	TUNE UP: Breaker Point Gap	TUNE UP: Spark Occurs °TC B-Before A-After	TUNE UP: Spark Occurs Flywheel Teeth °TC B-Before A-After	TUNE UP: Compression Pressure at Cranking Speed	VALVE SPRINGS: Valve Open: Average Pressure (Lb.)	VALVE SPRINGS: Valve Open: Length (In.)	VALVE SPRINGS: Valve Closed: Average Pressure (Lb.)	VALVE SPRINGS: Valve Closed: Length (In.)	TENSIONS: Cylinder Head (Lb.-Ft.)	TENSIONS: Main Bearings (Lb.-Ft.)	TENSIONS: Connecting Rod Bearings (Lb.-Ft.)
WHITE**																							
WC-16, 3016	Own 116A	6-3⅞x4½		15B		e	0	0	Ch	J6	14mm	.025	f	6B			99–107	2½		3	85–90	70–75	48–52
WC-20, 3020	Own 130A	6-4x4½		15B		e	0	0	Ch	J6	14mm	.025	f	6B			99–107	2½		3	85–90	70–75	48–52
WC-22PLT, WC-2264, 3022PLT, 3026	Own 150A	6-4x5½		15B		e	0	0	Ch	J6	14mm	.025	f	3B			99–107	2½		3	85–90	70–75	48–52
WC-28T, WC-2864	Own 290A	6-4⅝x5		15B		e	0	0	Ch	6 Com	18mm	.025	f	9B			I.174–81 / O.109–117	2⅝ / 2⅛	32–36 / 56–62	2.250 / 1.827	105–110	70–75	70–75
3022	Own 140A	6-3⅞x5½		15B		e	0	0	Ch	J6	14mm	.025	f	6B			99–107	2½		3	85–90	70–75	48–52
WHITE FREIGHTLINER																							
All Models	Cum NHB600	6-5½x6	35–55n	20B			.014	.027								525	109	1¹¹/₁₆	78	2¼	430–450	325	125–135

1—Inner. O—Outer. a—6 volt. b—Heavy duty. c—Each axle. d—12 volts. e—.040–.060. f—.018–.024. g—Straight mineral oil. h—Extreme pressure. i—Steering gear lube. k—Auxiliary transmission, 12 pt. Models WF64H, 64T, 32, m—Models 62P and 42, 38; others 20 each axle. p—At operating speeds. p—Models WF64H, WF64T not specified. Others, 30 qts. q—Mineral gear oil. r—Mineral

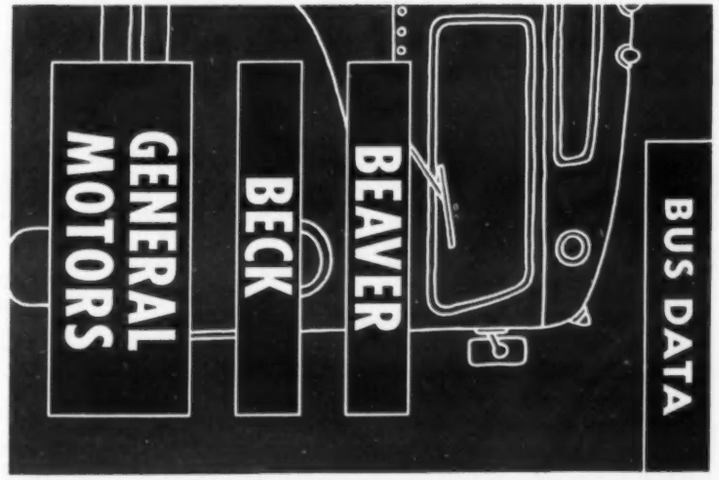
s—.018–.020. b—.028–.032. c—.018–.024. d—At 500 rpm. g—Minimum. f—Nuts, 155-180; bolts, 180-190. g—General purpose gear lube. h—Truck type hypoid gear oil. i—Automatic transmission fluid type A, or SAE 5W engine oil. k—Special steering gear lube. m—SAE 140 straight mineral gear oil or SAE 50 engine oil. D—Diesel.

COMMERCIAL CAR JOURNAL, April, 1954

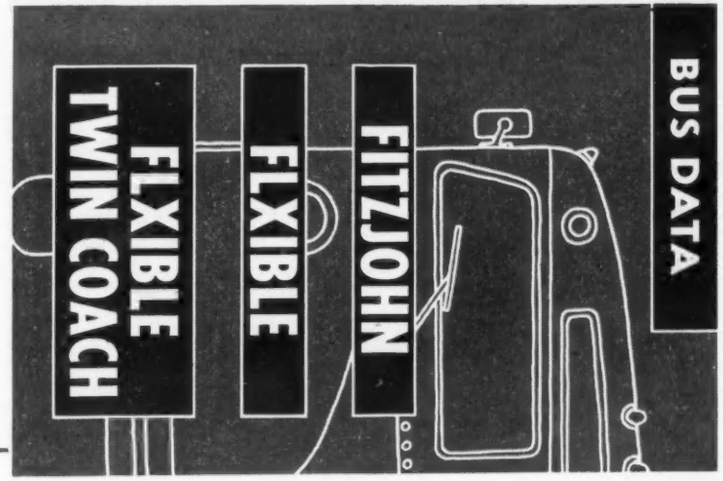
STANDARD ENGINE		Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After °TC	Intake Valve Opens B-Before A-After Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted) Intake	Operating Tappet Clearance (Hot unless noted) Exhaust	Spark Plug Make	Spark Plug Type	Spark Plug Size	Spark Plug Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Valve Springs Valve Open Average Pressure (Lb.)	Valve Springs Valve Open Length (In.)	Valve Springs Valve Closed Average Pressure (Lb.)	Valve Springs Valve Closed Length (In.)	Tensions Cylinder Head (Lb.-Ft.)	Tensions Main Bearings (Lb.-Ft.)	Tensions Connecting Rod Bearings (Lb.-Ft.)
BEAVER																							
B35PT, B40PT	IHC 450	6-4½x5	40–2600	8		.023	a	a	AC	J-11	14mm	b	c	TC		122	222		92		110	105	80
BECK																							
Mainliner "9000"	Cum JBS-600e		See engine	data,	pages	104–	107.																
GENERAL MOTORS																							
TGH 3102	GMC 270	6-3⅞x4	40–3200	14B		.012	.012	.020	AC	44 Com	14mm	.030	c	5B		110e	147	1 7/16	58	1 11/16	70–80	70–80	40–45
TDH 3714	GMD 4-71	4-4¼x5	40–2000					.009		Diesel						385d	140	1 11/16	44	2 3/16	165–175	f	65–75
TDH 4512, 5105, 5106, TDM 4515, 5108, PD 4104	GMD 6-71	6-4¼x5	40–2000					.009		Diesel						385d	140	1 11/16	44	2 3/16	165–175	f	65–75

STANDARD ENGINE		Engine Viscosity and Temperature Range			Transmission Summer	Transmission Winter	Rear Axle Summer	Rear Axle Winter	Steering Gear Summer	Steering Gear Winter	Universal Joints
BEAVER											
B35PT, B40PT	IHC 450	50 summer		40 winter	140	90	140g	90g	140	90	90
BECK											
Mainliner "9000"e	Cum JBS-600	30 above 32°	20 @ 32° to −10°	10 below −10°	140	90	140	90	140	90	140–90
GENERAL MOTORS											
TGH 3102	GMC 270	30 above 90°	20 above 32°	20W below 32°	j	j	140h	90h	k	k	140m
TDH 3714, 4512, 5105, 5106	GMD 4-71, 6-71	30 above 20°	20W below 20°		n	n	140h	90h	k	k	140m
TDM 4515, 5108, PD 4104	GMD 6-71	30 above 20°	20W below 20°		50	50	140h	90h	k	k	140m

STANDARD ENGINE		Battery Amp. Hr. Capacity	Battery Number of Plates	Battery Terminal Grounded	Battery SAE Group No.	Battery AABM Group No.	Front End Toe-in (In.)	Front End Camber (Deg.)	Front End Caster (Deg.)	Front End King Pin Slant (Deg.)	Capacities Lubricant Engine (Quarts)	Capacities Lubricant Transmission (Pints)	Capacities Lubricant Rear Axle (Pints)	Capacities Cooling System (Quarts)
BEAVER														
B35PT, B40PT	IHC 450	160	17	Pos		4B	1/32	1	0 to 2	5½	12	6	23	60
BECK														
Mainliner "9000"e	IHC RD-450	155p	27	Pos	8D		1/16–1/8	1	1½–3	5½	16	16	23	54
GENERAL MOTORS														
TGH 3102	GMC 270	150	19	Pos	4D		1/16–1/8	1	½	8½	10	26	11.25	28
TDH 3714	GMD 4-71	350	34	Pos	4B		1/16–1/8	1	3	8	21	60	20	61
TDH 4512	GMD 6-71	350	34	Pos	4B		1/16–1/8	1	3	8	26	60	20	61
TDM 4515	GMD 6-71	350	34	Pos	4B		1/16–1/8	1	3	8	26	21	20	72
TDH 5105, 5106	GMD 6-71	350	34	Pos	4B		1/16–1/8	1	3	8	26	60	26	72
TDM 5108	GMD 6-71	350	34	Pos	4B		1/16–1/8	1	3	8	26	21	26	72
PD 4104	GMD 6-71	310	54	Pos	8D		1/16–1/8	1	3	8	29	21	18	73.5



• FLXIBLE TW. COACH



BATTERY — FRONT END — CAPACITIES

MODEL No. — STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	Lubricant: Engine (Quarts)	Lubricant: Transmission (Pints)	Lubricant: Rear Axle (Pints)	Cooling System (Quarts)
FITZJOHN													
310 ... Her JXLD	150	19	Pos	4D	.....	1/8	1	1½	8	9	11	20	36
FTG ... Her JXLD	205a	27	Pos	8D	.....	1/8	1	2	5½	9	16	11	48
FTG ... Her WXLD	205a	27	Pos	8D	.....	1/8	1	2	5½	10	16	11	51
FTD ... Her DWXLD	150	19	Pos	4D	.....	1/8	1	2	5½	14	16	11	56
510 ... Her JXLD	150	19	Pos	4D	.....	1/16	1	1½	8	8	11	15	28
635 ... Wau 140GK	150	19	Pos	4D	.....	1/8	1	2	8	15	24	23	56
FLXIBLE													
218-B1-54 ... Buick FB-320	155	27	Pos	.....	8D	1/16–1/8	1	2	5½	16	11	23	56b
218-F1-54 ... Fag FTC-180	155	27	Pos	.....	8D	1/16–1/8	1	2	5½	12	11	23	58b
218-JBSI-54 ... Cum JBS-600	155	27	Pos	.....	8D	1/16–1/8	1	2	5½	16	11	23	60b
FLXIBLE TWIN COACH Engines Interchangeable													
FT-30, FT-33 ... Fag FTC-180, FTC-210	158	17	Pos	.....	4B	1/16	1	1¼–1¾	5½	20c	7d	19e	32b
FT-35, FT-40 ... Fag FTC-200	158	17	Pos	.....	4B	1/16	1	1¼–1¾	5½	20c	7d	21e	32b

LUBRICATION

MODEL No. — STANDARD ENGINE	Engine: Viscosity and Temperature Range	Transmission: Summer	Transmission: Winter	Rear Axle: Summer	Rear Axle: Winter	Steering Gear: Summer	Steering Gear: Winter	Universal Joints
FITZJOHN								
310 ... Her JXLD	30 summer 20 winter	140	90	140f	90f	140	140	140
FTG, FTD, 510 ... Her WXLD	30 summer 30 winter	140	90	140	90	140	140	140
635 ... Wau 140GK	40 summer 40 winter	140	90	140f	90f	140	140	140
FLXIBLE								
218-B1-54 ... Buick FB-320	Summer and Winter 10 or 20	50g	50g	h	h	50g	50g	l
218-F1-54 ... Fag FTC-180	Summer and Winter 30 or 20	50g	50g	h	h	50g	50g	l
218-JBSI-54 ... Cum JBS-600	Breaking in or below 20°, 10; 20° to 80°, 20; above 80°, 30	50g	50g	h	h	50g	50g	l
FLXIBLE TWIN COACH Engines Interchangeable								
FT-30, FT-33 ... Fag FTC-180, FTC-210	10 above 0° 20 above 20° 30 above 50°	140m,k	90m,k	140k	90k	140k	90k	No 1n
FT-35, FT-40 ... Fag FTC-200	10 above 0° 20 above 20° 30 above 30°	140m,k	90m,k	140k	90k	140k	90k	No 1n

TUNE UP — VALVE SPRINGS — TENSIONS

MODEL No. — STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Intake Valve Opens B-Before A-After: Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted): Intake	Operating Tappet Clearance (Hot unless noted): Exhaust	Spark Plug: Make	Spark Plug: Type	Spark Plug: Size	Spark Plug: Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Valve Springs: Valve Open: Average Pressure (Lb.)	Valve Springs: Valve Open: Length (In.)	Valve Springs: Valve Closed: Average Pressure (Lb.)	Valve Springs: Valve Closed: Length (In.)	Tensions: Cylinder Head (Lb.-Ft.)	Tensions: Main Bearings (Lb.-Ft.)	Tensions: Connecting Rod Bearings (Lb.-Ft.)
FITZJOHN																						
310, FTG, 510 ... Her JXLD	6-4x4½	26-1600	5B	Var	.010	.012	.014	AL	TT4	⅞"	.025	.018	TC	.....	.....		See Hercules, page 106			75	p	56
FTG ... Her WXLD	6-4¼x4¾	26-1600	2A	Var	.010	.012	.016	CH	J6	14mm	.025	.018	TC	.....	.....		See Hercules, page 106			60	q	53
FTG ... Her DWXLD	6-4¼x5	40-1600	17½B	Var	.010	.008	.010	.....	Diesel				.....	.....	.....		See Hercules, page 106			158	175	225
635 ... Wau 140GK	6-4½x5½	40-2600	.....	.....	.....	.012	.024	CH	H9	14mm	.025	.018	TC	.....	.....		See Waukesha, page 107			175	133	100
FLXIBLE																						
218-B1-54 ... Buick FB-320	8-3 7/16x4 1/16	35-45-2400	14B	.....	.....	.015	.015	AC	46X	14mm	.025	.015	6B	.....	120	I. 52 O. 120	1 1/16 1 1/16	24 52	1 3/16 1 1/16	65-70	100-110	60-65
218-F1-54 ... Fag FTC-180	6-4¼x4¾	45-55-2400	12B	.....	.018	.018	.018	CH	J-5	14mm	.020	.022	4B	.....	155	132-140	1 1/16	65-72	1 1/16	80	90	90
218-JBSI-54 ... Cum JBS-600	6-4⅛x5	30-50-2500	41B	.....	.....	.025	.025	.....	Diesel				.....	.....	525	108-118	2	66-72	2 1/16	See Cummins, page 106		
FLXIBLE TWIN COACH Engines Interchangeable in All Models																						
..... Fag FTC-180	6-4¼x4¾	45-2000	12B	.....	.018	.012	.015	CH	J-5	14mm	.020	.018	TC	TC	160	132-140	1 1/16	65-72	1 1/16	80	90	90
..... Fag FTC-200	6-4⅝x5	45-2000	12B	.....	.018	.012	.015	CH	J-5	14mm	.020	.018	TC	TC	155	132-140	1 1/16	65-72	1 1/16	80	90	90
..... Fag FTC-210	6-4½x6	45-2000	12B	.....	.018	.012	.015	CH	J-5	14mm	.020	.018	TC	TC	150	132-140	1 1/16	65-72	1 1/16	80	90	90

a—2 batteries. b—Including front and rear heaters. c—12 qt. change, sfe. d—At 20 hr. discharge rate. e—Hydraulic transmission. f—With 2660 series axle. k—Viscous medium bodied semi-fluid grease. l—Gateway pressure lube. m—With pressure lube. n—Hypoid. p—Chassis lube. q—Ex- p—Front and intermediate, 70; center and rear, 90. g—Front and intermediate, 100 continues to a total of 13°. t—Bolts, 65-70; nuts, 50-55. u—Cold. v—At 200 rpm.

COMMERCIAL CAR JOURNAL, April, 1954

MODEL No. — TUNE UP — VALVE SPRINGS — TENSIONS

FLXIBLE TWIN COACH	Cum JBS-600	6-4½x5	30-50-2500	41B	.....	.....	.025	.025	.....	Diesel						525	108-118	2	66-72	2¾	See Cum mins, page	106
Engines Interchangeable in All Models																						
	Fag FTC-180	6-4¼x4¾	45-2000	12B	.....	.018	.012	.015	CH	J-5	14mm	.020	.018	TC	TC	160	132-140	1⅛	65-72	1⅛	80	90	90
	Fag FTC-200	6-4⅝x5	45-2000	12B	.....	.018	.012	.015	CH	J-5	14mm	.020	.018	TC	TC	155	132-140	1⅛	65-72	1⅛	80	90	90
	Fag FTC-210	6-4⅝x6	45-2000	12B	.....	.018	.012	.015	CH	J-5	14mm	.020	.018	TC	TC	150	132-140	1⅛	65-72	1⅛	80	90	90

d—At 20 hr. discharge rate. e—Hydraulic transmission. f—With 2660 series axle. pressure lube. m—Hydraulic transmission. n—Hypoid. p—Chassis lube. q—Ex- continues to a total of 18°. t—Bolts, 65-70; nuts, 50-55. u—Cold. v—At 200 rpm.

TUNE UP

MODEL No. / STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted): Intake	Exhaust	Spark Plug: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed
MARMON-HERRINGTON															
All Models ..... Ford 254	6-3.5x4.4	50-2000	11B	.....	.015	.....	.....	CH	H-9 Com	14mm	.025	.025	TCs	.....	.....
SOUTHERN															
S-41HF, S-45HF ..... Fag FTC-180	6-4¼x4¾	45-2100	10-14B	.....	.018	.012u	.015u	CH	J-5	14mm	.020	.020	TC	.....	155f
S-45DHC ..... Cum NHHB-600	6-5⅛x6	30-50-2100	20B	.....	.....	.014	.027	.....	Diesel		.....	.....	.....	.....	.....
TRANSIT															
328, 332 ..... Cont K-6330	6-4x4⅛	40-2000	22B	.....	.....	.022	.024	CH	J-8	14mm	.030	.020	8B	.....	125
340 ..... Le Roi H-540	8-4⅛x4¼	40-2000	TC	.....	.....	.013	.013	CH	J-8	14mm	.030	.016	10B	.....	

VALVE SPRINGS

MODEL No. / STANDARD ENGINE	Valve Open: Average Pressure (Lb.)	Valve Open: Length (In.)	Valve Closed: Average Pressure (Lb.)	Valve Closed: Length (In.)
MARMON-HERRINGTON				
All Models ..... Ford 254	112-120	.....	47-53	2.109
SOUTHERN				
S-41HF, S-45HF ..... Fag FTC-180	O. 100	1⅛	50	1⅜
	I. 52	1⅝	21	1⅛
S-45DHC ..... Cum NHHB-600	104-114	1⅜	74-82	2¼
TRANSIT				
328, 332 ..... Cont K-6330	121-131	1.110	77-85	1.016
340 ..... Le Roi H-540	.....	.....	.....	.....

TENSIONS

MODEL No. / STANDARD ENGINE	Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
MARMON-HERRINGTON			
All Models ..... Ford 254	t	95-100	.....
SOUTHERN			
S-41HF, S-45HF ..... Fag FTC-180	60-65	85-90	90-100
S-45DHC ..... Cum NHHB-600	See Cum mins, page 106.		
TRANSIT			
328, 332 ..... Cont K-6330	.....	.....	.....
340 ..... Le Roi H-540	90	95	60

LUBRICATION

MODEL No. / STANDARD ENGINE	Engine: Viscosity and Temperature Range			Transmission: Summer	Transmission: Winter	Rear Axle: Summer	Rear Axle: Winter	Steering Gear: Summer	Steering Gear: Winter	Universal Joints
MARMON-HERRINGTON										
All Models ..... Ford 254	30 above 32°	20 above 20°	10W @ −10° to 10°	50i	50i	140j	90j	90k	90k	140
SOUTHERN										
S-41HF, S-45HF ..... Fag FTC 180	10W below 30°	20W @ 30° −50°	30 @ 50° to 70°	50m	50m	140n	140n	140	140	p
S-45DHC ..... Cum NHHB-600	10W below 20°	20W @ 20° −80°	30W above 80°	50m	50m	140n	140n	140	140	0
TRANSIT										
328, 332 ..... Con K-6330	40—summer	30—winter	.....	140j	90j	140q	90q	90q	90q	140r
340 ..... Le Roi H-540	10W below 0°	20W −0° to 32°	30 −32° to 90°r	140j	90j	140q	90q	90q	90q	140r

BATTERY

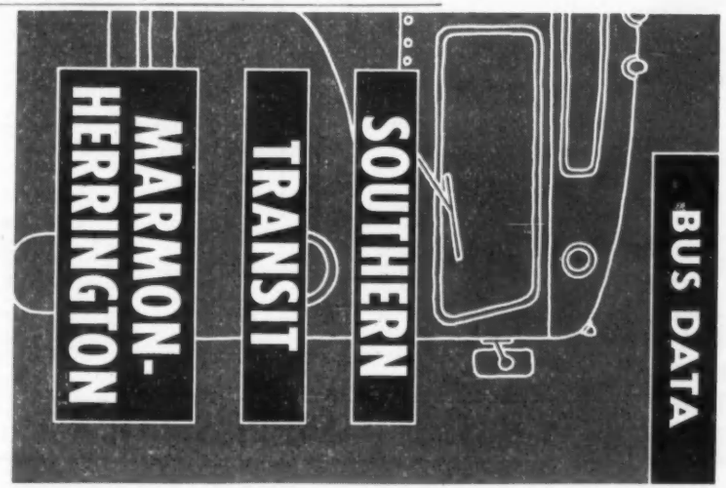
TRUCK / STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.
MARMON-HERRINGTON					
All Models ..... Ford 254	158	17	Pos	.....	.....
SOUTHERN					
S-41HF, S-45HF(e) ..... Fag FTC180	160d	17	Pos	8G	.....
S-45 D.H.C. (f) ..... Cum NHHB-600	200d	25	Pos	8D	.....
TRANSIT					
328, 332 ..... Cont K-6330	160	17	Pos	8G	Z
340 ..... Le Roi H-540	160	17	Pos	8G	Z

FRONT END

TRUCK / STANDARD ENGINE	Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)
MARMON-HERRINGTON				
All Models ..... Ford 254	0-1/8	1	3	.....
SOUTHERN				
S-41HF, S-45HF(e) ..... Fag FTC180	1/8 ± 1/16	1 ± ½	1	5⅛
S-45 D.H.C. (f) ..... Cum NHHB-600	1/8 ± 1/16	1 ± ½	1	5½
TRANSIT				
328, 332 ..... Cont K-6330	1/16-1/8	1	3	8½
340 ..... Le Roi H-540	1/16-1/8	1	3	5

CAPACITIES

TRUCK / STANDARD ENGINE	Lubricant: Engine (Quarts)	Lubricant: Transmission (Pints)	Lubricant: Rear Axle (Pints)	Cooling System (Quarts)
MARMON-HERRINGTON				
All Models ..... Ford 254	9a	9	7	34b
SOUTHERN				
S-41HF, S-45HF(e) ..... Fag FTC180	12g	3½e	20	60
S-45 D.H.C. (f) ..... Cum NHHB-600	32g	6e	30	60
TRANSIT				
328, 332 ..... Cont K-6330	6	5½	8	42h
340 ..... Le Roi H-540	10	10	30	66½h



BUDA & HALL SCOTT

• BUDA

MODEL No.	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Intake Valve Opens: Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted): Intake	Operating Tappet Clearance: Exhaust	Spark Plug: Make	Spark Plug: Type	Spark Plug: Size	Spark Plug: Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Valve Open: Average Pressure (Lb.)	Valve Open: Length (In.)	Valve Closed: Average Pressure (Lb.)	Valve Closed: Length (In.)	Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
6B230	6-3 7/16x4 1/2	20-1600	10B	......	.008	.009	.009	CH	J-11	14mm	.027	.018	......	......	......	122-131	1 13/32	42-47	1 27/32	†	*	*
6B273	6-3 3/4x4 1/2	20-1600	10B	......	.008	.009	.009	CH	J-11	14mm	.027	.018	......	......	......	122-131	1 13/32	42-47	1 27/32	†	*	*
HP326	6-3 11/16x4 3/4	40-1400	TC	......	.006	.006	.009	CH	8 Com	18mm	.025	.018	......	......	103	96-104	1 [illegible]	34-38	1 [illegible]	†	*	*
HP351	6-3 11/16x5 1/8	40-1400	TC	......	.006	.006	.009	CH	8 Com	18mm	.025	.018	......	......	103	96-104	1 [illegible]	34-38	1 [illegible]	†	*	*
K428	6-4 5/8x4 3/4	40-1400	6B	......	.006	.006	.009	CH	10Com64	18mm	.025	.018	......	......	102	125-138	1 [illegible]	51-57	2 [illegible]	†	*	*
L525	6-4 1/2x5 1/2	40-1600	6B	......	.006	.006	.009	CH	10Com64	18mm	.025	.018	......	......	87	125-138	1 [illegible]	51-57	2 [illegible]	†	*	*
LO525	6-4 1/2x5 1/2	40-1500	10B	......	.009	.009	.018	CH	J-6	14mm	.027	.018	......	......	93	128-136	2 [illegible]	42-49	3 [illegible]	†	*	*
6MO893	6-5 3/8x6	40-1400	10B	......	.010	.015	.015	CH	6 Com	18mm	.025	.018	......	......	105	145-155	2 1/16	62-68	2 3/4	†	*	*
6MO970	6-5 3/8x6 1/2	40-1400	10B	......	.010	.015	.015	CH	6 Com	18mm	.025	.018	......	......	125	145-155	2 1/16	62-68	2 3/4	†	*	*
6BD230	6-3 7/16x4 1/8	20-1600	20B	......	.008	.009	.009	......	Diesel		......	......	......	......	......	122-131	1 [illegible]	42-47	1 [illegible]	†	*	*
6BD273	6-3 3/4x4 1/8	20-1800	20B	......	.008	.009	.009	......	Diesel		......	......	......	......	......	122-131	1 [illegible]	42-47	1 [illegible]	†	*	*
6DT317	6-3 5/8x5 1/8	30-1600	20B	......	.009	.009	.012	......	Diesel		......	......	......	......	......	97-105	1 [illegible]	40-44	1 [illegible]	†	*	*
6DT468	6-4 1/4x5 1/2	30-1600	17B	......	.010	.012	.015	......	Diesel		......	......	......	......	......	138-145	1 [illegible]	52-58	2 1/16	†	*	*
6DTS468	6-4 1/4x5 1/2	40-1800	48B	......	......	.016	.020	......	Diesel		......	......	......	......	......	155-165	1 [illegible]	55-61	2 1/16	†	*	*
6DAS516	6-4 7/16x5 3/16	35-1500	30B	......	.010	.012	.015	......	Diesel		......	......	......	......	......	155-165	1 [illegible]	55-61	2 1/16	190-200	‡	123-135
6DA779	6-5 1/4x6	40-1400	20B	......	.010	.015	.015	......	Diesel		......	......	......	......	......	200-210	2 [illegible]	76-86	2 3/4	†	*	*
6DA844	6-5 1/4x6 1/2	40-1400	20B	......	.010	.015	.015	......	Diesel		......	......	......	......	......	200-210	2 [illegible]	76-86	2 3/4	†	*	*
6DAS844	6-5 1/4x6 1/2	40-1400	30B	......	.010	.015	.015	......	Diesel		......	......	......	......	......	200-210	2 [illegible]	76-86	2 3/4	†	*	*
8DA1125	8-5 1/4x6 1/2	40-1400	20B	......	.010	.015	.015	......	Diesel		......	......	......	......	......	200-210	2 [illegible]	76-86	2 3/4	†	*	*
8DAS1125	8-5 1/4x6 1/2	40-1400	30B	......	.010	.015	.015	......	Diesel		......	......	......	......	......	200-210	2 [illegible]	76-86	2 3/4	†	*	*

†—3/8"—60-70; 7/16"—75-85; 1/2"—95-105; 9/16"—125-135; 5/8"—150-160. *—11/16"—195-200; 3/4"—210-230; 13/16"—230-250; 7/8"—245-275; 1"—285-315; 1 1/8"—325-350. ‡—5/8"—180-190; 3/4"—210-230.

• HALL-SCOTT

MODEL No.	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Intake Valve Opens: Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted): Intake	Operating Tappet Clearance: Exhaust	Spark Plug: Make	Spark Plug: Type	Spark Plug: Size	Spark Plug: Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Valve Open: Average Pressure (Lb.)	Valve Open: Length (In.)	Valve Closed: Average Pressure (Lb.)	Valve Closed: Length (In.)	Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
136*	6-4 1/4x5	56-2000	10B	......	......	.023	.023	CH	6 Com	18mm	.018	a	TC	......	150	I. 73 O. 125	1.88 1.95	37 62	2.33 2.40	d	130-140	70-80
504*	6-4 5/8x5	55-2000	10B	......	......	.025	.025	CH	6 Com	18mm	.018	a	13B	......	120	I. 73 O. 125	1.88 1.95	37 62	2.33 2.40	d	130-140	70-80
180*	6-5x6	60-2000	7B	......	......	.021	.021	CH	6 Com	18mm	b	a	12B	......	116	I. 110 O. 143	1.9 2	48 74	2.4 2.5	e	180-200	130-140
190*	6-5 1/4x6	60-2000	7B	......	......	.021	.021	CH	6 Com	18mm	b	a	12B	......	114	I. 110 O. 143	1.9 2	48 74	2.4 2.5	e	180-200	130-140
590	6-5x5	......	10B	......	.022	.022	.022	CH	J6	14mm	.025	.020	......	......	......	I. 80 O. 143	1.75 1.81	40 74	2.25 2.31	f	130-140	100-120
470	6-5 1/2x6	55-1600	10B	......	.021	.021	.031	CH	c	18mm	.018	g	2B	......	j	I. 110 O. 143	1.9 2	48 74	2.4 2.5	e	180-200	130-140
855	6-5 1/2x6	60-1000	10B	......	.021	.021	.031	CH	c	18mm	.018	g	h	......	j	I. 110 O. 143	1.9 2	48 74	2.4 2.5	e	180-200	130-140
480	6-5 3/4x6	55-1600	10B	......	......	.021	.031	CH	c	18mm	.018	g	2B	......	j	I. 110 O. 143	1.9 2	48 74	2.4 2.5	e	180-200	130-140
935	6-5 3/4x6	60-1000	10B	......	.021	.021	.031	CH	c	18mm	.018	g	h	......	j	I. 110 O. 143	1.9 2	48 74	2.4 2.5	e	180-200	130-140
400	6-5 3/4x7	55-1600	10B	......	......	.021	.031	CH	c	18mm	.018	g	2B	......	j	I. 110 O. 143	1.9 2	48 74	2.4 2.5	e	180-200	130-140
1091	6-5 3/4x7	60-1000	10B	......	.021	.021	.031	CH	c	18mm	.018	g	2B	......	j	I. 110 O. 143	1.9 2	48 74	2.4 2.5	e	180-200	130-140

a—.018-.024. b—Intake, .018; exhaust, .020. c—Two per cylinder. All exhaust, 6. Butane intake, 8. Gasoline intake, 9. d—Large nuts, 115-120; small nuts, 30-40. e—Large nuts, 230-250; small nuts, 30-40. f—Large nuts, 140-160; small nuts, 30-40. g—Delco-Remy, single and Auto-Lite, dual, .020; Delco-Remy dual, .015. h—Model No. 855, Butane, 11°B, Gasoline, 6°B. Model No. 935, Butane, 4°B, Gasoline, 2°B. j—Gasoline, 110; Butane, 160.

MODEL No.	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After °TC	Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted) Intake	Exhaust	Spark Plug Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Valve Springs Valve Open Average Pressure (Lb.)	Valve Open Length (In.)	Valve Closed Average Pressure (Lb.)	Valve Closed Length (In.)	Tensions Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
CONTINENTAL																						
F4124	4-3 3/16x4 5/16	35-40	TC			.014	.014			18mm	.025				115	100	1 11/16	50	1 11/16	†	•	•
F4162	4-3 7/16x4 5/16	35-40	TC			.014	.014			18mm	.025				115	100	1 11/16	50	1 11/16	†	•	•
F6186	6-3x4 5/16	35-40	2B			.014	.014a			18mm	.025				115	103-110	1 5/16	47-53	1 1/16	†	•	•
F8209	8-3 3/16x4 5/16	35-40	2B			.014	.014			18mm	.025				115	103-110	1 5/16	47-53	1 1/16	†	•	•
F8226	8-3 3/16x4 5/16	30-40	2B			.014	.014			18mm	.025				115	103-110	1 5/16	47-53	1 1/16	†	•	•
M8271	8-3 5/16x4 5/16	40-50	6 1/2B			.017	.020			18mm	.025				115	119	1.521	61	1 1/16	†	•	•
M8290	8-3 5/16x4 5/16	40-50	6 1/2B			.017	.020			18mm	.025				115	119	1.521	61	1 1/16	†	•	•
K6330	6-4x4 5/16	40-50	22B			.018	.022			18mm	.025									†	•	•
M6330	6-4x4 5/16	40-50	6 1/2B			.017	.020			18mm	.025				115	119	1.521	61	1 7/16	†	•	•
B6371	6-4 1/16x4 5/16	40-50	6 1/2B			.017	.022			18mm	.025				115	144	1.316	69	1.617	†	•	•
T6371	6-4 1/16x4 5/16	40-60	20B			.018	.022			18mm	.025				115	O. 130	1.110	69	1.548	†	•	•
																I. 61	1.016	29	1.453			
B6427	6-4 1/16x4 7/16	40-50	16B			.017	.022			18mm	.025				115	144	1.316	69	1.617	†	•	•
T6427	6-4 1/16x4 7/16	40-60	20B			.018	.022			18mm	.025				115	O. 130	1.110	69	1.548	†	•	•
																I. 61	1.016	29	1.453			
U6501	6-4 1/16x5 1/16	40-50	17B			.016	.024			18mm	.025				120					†	•	•
R6513	6-4 1/16x5 1/16	50-60	19B			.018	.024			18mm	.025				120	O. 160	1.617	87	2.117	†	•	•
																I. 90	1.367	38	1.867			
R6572	6-4 3/16x5 1/16	50-60	19B			.018	.024			18mm	.025				120	173	1 3/4	78	2 1/4	†	•	•
R6602	6-4 7/16x5 1/16	50-60	17B			.018	.024			18mm	.025				120	O. 160	1.617	87	2.117	†	•	•
																I. 90	1.367	38	1.867			
S6749	6-8 5/16x5 1/16	40-60	19B			.020	.024			18mm	.025				120	O. 200	2 1/16	90	2 1/16	†	•	•
S6820	6-5 5/16x5 1/2	40-60	17B			.020	.024			18mm	.025				120	O. 200	2 1/16	90	2 1/16			
																I. 100	2 5/16	45	2 1/16			
SD6802	6-5 1/16x5 1/2	40-60	16B			.020	.024		Diesel						375	204	2 1/16	93	2 1/16	†	•	•
																I. 100	2 5/16	45	2 1/16			
TD6427	6-4 1/16x4 7/16	40-60	20B			.017	.022		Diesel						375	O. 130	1.110	69	1.548	†	•	•
																I. 61	1.016	29	1.453			
RD6572	6-4 3/16x5 1/16	40-60	19B			.018	.024		Diesel						375	173	1 3/4	78	2 1/4	†	•	•

†—5/16", 35-40; 1/16", 70-75; 1/2", 90-100; 1/16", 130-140; 5/16", 145-155. •—1/16", 20-25; 5/16", 35-40; 1/16", 70-75; 1/2", 85-95; 1/16", 105-110. a—With Roto Valve, .010. O.—Outer. I.—Inner.

• LeROI

MODEL No.	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After °TC	Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted) Intake	Exhaust	Spark Plug Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Valve Springs Valve Open Average Pressure (Lb.)	Valve Open Length (In.)	Valve Closed Average Pressure (Lb.)	Valve Closed Length (In.)	Tensions Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
LE ROI																						
TH510	8-4 1/16x4 1/16	45-	TC			.013	.013	CH	J8	14mm	.027	.018	35B*		130	106	1.6	53	2.0	90	95	60
TH844	8-5 1/16x4 1/16	45-	TC			.013	.013	CH	J8	14mm	.027	.018	35B†		135	136	1.8	64	2 1/16	90	150	90

* at 2800 rpm † at 2600 rpm.

CUMMINS & HERCULES

• CUMMINS

MODEL No.	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	TUNE UP: Intake Valve Opens B-Before A-After °TC	TUNE UP: Intake Valve Opens B-Before A-After Flywheel Teeth °TC	TUNE UP: Intake Tappet Clearance for Valve Timing	TUNE UP: Operating Tappet Clearance (Hot unless noted) Intake	TUNE UP: Operating Tappet Clearance (Hot unless noted) Exhaust	TUNE UP: Spark Plug Make	TUNE UP: Spark Plug Type	TUNE UP: Spark Plug Size	TUNE UP: Spark Plug Gap	TUNE UP: Breaker Point Gap	TUNE UP: Spark Occurs °TC B-Before A-After	TUNE UP: Spark Occurs Flywheel Teeth °TC B-Before A-After	TUNE UP: Compression Pressure at Cranking Speed	VALVE SPRINGS: Valve Open Average Pressure (Lb.)	VALVE SPRINGS: Valve Open Length (In.)	VALVE SPRINGS: Valve Closed Average Pressure (Lb.)	VALVE SPRINGS: Valve Closed Length (In.)	TENSIONS: Cylinder Head (Lb.-Ft.)	TENSIONS: Main Bearings (Lb.-Ft.)	TENSIONS: Connecting Rod Bearings (Lb.-Ft.)
CUMMINS																						
AA600	6-4x5	30-50*	6B			.015	.025		Diesel				**			169-187	2	81-91	2 1/16			
JBS600	6-4 1/8x5	30-50*	41B			.015	.025		Diesel							169-187	2	81-91	2 1/16			
HB400	4-4 7/8x6	30-50*	5B			.014	.022		Diesel							179-198	2 3/16	110-122	2 1/16			
HB600	6-4 7/8x6	30-50*	5B			.014	.022		Diesel							179-198	2 3/16	110-122	2 1/16			
HBS600	6-4 7/8x6	30-50*	77B			.016	.028		Diesel							179-198	2 3/16	110-122	2 1/16			
HRB600	6-5 1/8x6	30-50*	5B			.014	.022		Diesel							179-198	2 3/16	110-122	2 1/16			
HRBS600	6-5 1/8x6	30-50*	77B			.016	.028		Diesel							179-198	2 3/16	110-122	2 1/16			
NHB600, NHHB600	6-5 1/8x6	30-50*	20B			.014	.027		Diesel							104-114	1 13/16	74-82	2 1/4			
NHBS600	6-5 1/8x6	30-50*	77B			.014	.027		Diesel							104-114	1 13/16	74-82	2 1/4			
NHHBS600	6-5 1/8x6	30-50*	77B			.014	.027		Diesel													
NHRBS600	6-5 1/8x6	30-50*	55B			.014	.027		Diesel							104-114	1 13/16	74-82	2 1/4			
NVH1200	12-5 1/8x6	30-50*	20B			.014	.027		Diesel							104-114	1 13/16	74-82	2 1/4			
NVHS1200	12-5 1/8x6	30-50*	77B			.014	.027		Diesel							104-114	1 13/16	74-82	2 1/4	See	Table	Below

*—At governed r.p.m.

CUMMINS RECOMMENDS THE FOLLOWING PROCEDURES WITH REGARD TO ALL TENSIONS

Part	Engine Model	Initial Tighten	Release Tension	"Snug" Tension	Final Tighten	Engine Model	Initial Tighten	Release Tension	"Snug" Tension	Final Tighten	Engine Model	Initial Tighten	Release Tension	"Snug" Tension	Final Tighten
Cylinder Head	AA, JBS	160	Loosen	30	60 deg	HB, HBS, HRB	320	Loosen	140	430-450 30 deg	NVH, NVHS	125	Loosen	125	480 60 deg
Main Bearings		25-30	Loosen	25-30	60 deg	HRBS, NHB	140	Loosen	50-55	60 deg		140	Loosen		140
Connecting Rod Bearings						NHBS, NHHB, NHRBS									

‡—Push rod side, 240; manifold side, 220. deg—Degrees.

• HERCULES

MODEL No.	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	TUNE UP: Intake Valve Opens B-Before A-After °TC	TUNE UP: Intake Valve Opens B-Before A-After Flywheel Teeth °TC	TUNE UP: Intake Tappet Clearance for Valve Timing	TUNE UP: Operating Tappet Clearance (Hot unless noted) Intake	TUNE UP: Operating Tappet Clearance (Hot unless noted) Exhaust	TUNE UP: Spark Plug Make	TUNE UP: Spark Plug Type	TUNE UP: Spark Plug Size	TUNE UP: Spark Plug Gap	TUNE UP: Breaker Point Gap	TUNE UP: Spark Occurs °TC B-Before A-After	TUNE UP: Spark Occurs Flywheel Teeth °TC B-Before A-After	TUNE UP: Compression Pressure at Cranking Speed	VALVE SPRINGS: Valve Open Average Pressure (Lb.)	VALVE SPRINGS: Valve Open Length (In.)	VALVE SPRINGS: Valve Closed Average Pressure (Lb.)	VALVE SPRINGS: Valve Closed Length (In.)	TENSIONS: Cylinder Head (Lb.-Ft.)	TENSIONS: Main Bearings (Lb.-Ft.)	TENSIONS: Connecting Rod Bearings (Lb.-Ft.)
HERCULES																						
IX Series		15-1000	5A	Var	.006	.006	.008		Opt		.025	.020	n	n	Opt	42	1 1/16	21	1 7/16	40	77	42
ZX Series		15-1000	5A	Var	.006	.006	.006		Opt		.025	.020	n	n	Opt	35	1 1/16	22	1 1/16	35	77	25
JXA, JXB, JXD, JXF, JX3, JX6		26-1600	5A	Var	.010	.008	.010		Opt		.025	.020	n	n	Opt	58	1.594	43	1.920	c	*80 **70	56
QXA, QXB, QXC, QXD		26-1600	5B	Var	.006	.006	.008		Opt		.025	.020	n	n	Opt	37-41	1 5/32	17-19	1 11/32	d	*60 **70	39
WX Series		26-1600	2A	Var	.010	.006	.010		Opt		.025	.020	n	n	Opt	102	2 5/32	50	2 11/16	100	*70 **105	105 †153
QXLD	6-3 7/8x4 1/2	26-1600	5B	Var	.006	.006	.010		Opt		.025	.020	n	n	Opt	37-41	1 5/32	17-19	1 11/32	d	*60 **70	39
JX4C, JX4D, JX4E		32-1600	5B	Var	.010	.010	.010		Opt		.025	.020	n	n	Opt	58	1.594	43	1.920	c	*60 **70	56
JXLD	6-4x4 1/2	35-1600	5B	Var	.010	.010	.010		Opt		.025	.020	n	n	Opt	58	1.594	43	1.920	c	*60 **70	56
RXB	6-4 1/8x5 3/4	26-1600	2A	Var	.010	.010	.016		Opt		.025	.020	n	n	Opt	102	2 5/32	50	2 11/16	75	*105 **123	105 ***115
TDXB, TDXC	6-4 1/8x5 3/4	36-1600	5B	Var	.010	.010	.016		Opt		.025	.020	n	n	Opt	102	2 5/32	50	2 11/16	100	*105 **123	115
RXC	6-4 1/8x5 3/4	36-1600	2A	Var	.010	.010	.016		Opt		.025	.020	n	n	Opt	102	2 5/32	50	2 11/16	75	*105 **123	105 ***115
RXL Series		36-1600	2A	Var	.010	.010	.016		Opt		.025	.020	n	n	Opt	102	2 5/32	50	2 11/16	80	175	158 †123
HXB	6-5x6	36-1600	5B	Var	.015	.010	.016		Opt		.025	.020	n	n	Opt	O. 84 I. 50	3 3/32 2 1/16	47 27	3 5/16 3 3/32	105	*193 **210	263
HXC, HXD, HXE, HXLD, HXLE		35-1600	5B	Var	.015	.010	.016		Opt		.025	.020	n	n	Opt	O. 84 I. 50	3 3/32 2 1/16	47 27	3 5/16 3 3/32	105	*193 **210	263

WA

JXLD	6-4x4½	35-1600	5B	Var	.010	.010	.010		Opt		.025	.020	n	n	Opt	58	1.594	43	1.920	c	*60 **70	56
RXB	6-4½x5¼	26-1600	2A	Var	.010	.010	.016		Opt		.025	.020	n	n	Opt	102	2⅞	50	2¹¹/₁₆	75	*105 **123	106 ***118
TDXB, TDXC	6-4½x5¼	36-1600	5B	Var	.010	.010	.016		Opt		.025	.020	n	n	Opt	102	2⅞	90	2¹¹/₁₆	100	*105 **123	118
RXC	6-4½x5¼	36-1600	2A	Var	.010	.010	.016		Opt		.025	.020	n	n	Opt	102	2⅞	50	2¹¹/₁₆	75	*105 **123	105 ***115
RXL Series		36-1600	2A	Var	.010	.010	.016		Opt		.025	.020	n	n	Opt	102	2⅞	50	2¹¹/₁₆	80	175	158 ††123
HXB	6-5x6	36-1600	5B	Var	.015	.010	.016		Opt		.025	.020	n	n	Opt	O. 84 I. 50	3⅜ 2¹¹/₁₆	47 27	3⅜ 3⅛	105	*193 **210	263
HXC, HXD, HXE, HXLD, HXLE		35-1600	5B	Var	.015	.010	.016		Opt		.025	.020	n	n	Opt	O. 84 I. 50	3⅜ 2¹¹/₁₆	47 27	3⅛ 3⅜	105	*193 **210	263
DIX4D, DIX6D		45-2000	17½B	Var	.010	.010	.010		Die	sel						O. 49 I. 34	1.2125 1.0875	26 16	1.5625 1.4375	158	105a 85b	150
DJX Series		45-2000	12B	Var	.010	.010	.010		Die	sel						O. 55 I. 37	1.406 1.281	31 19	1.781 1.656	158	*77 **95	175
DIX6-272	6-3¹¹/₁₆x4¼	45-2000	5B	Var	.015	.010	.016		Die	sel										158	105a	150
DOO Series		30-1200	12B	Var	.010	.010	.010		Die	sel						O. 55 I. 37	1.406 1.281	31 19	1.781 1.656	158	*77 **95	175
DWX, DWXL Series		40-1600	17½B	Var	.010	.016	.016		Die	sel						O. 84 I. 74	1¹³/₁₆ 1¹¹/₁₆	38 28	1¹¹/₁₆ 1⅞	158	175	+225 ††158
DRXB, DRXC		30-1200	12B	Var	.016	.016	.016		Die	sel						O. 48 I. 30	1.449 1.335	27 17	1.844 1¾	⅝"-175 1"-280	175	175
DRX501	6-4½x5¼	30-1200	15B	Var	.016	.016	.016		Die	sel						O. 48 I. 30	1.449 1.335	27 17	1.844 1¾	⅝"-175 1"-280	175	175
DFXB, DFXC, DFXD, DFXE		50-1200	5B	Var	.015	.010	.016		Die	sel						O. 94 I. 57	2¹¹/₁₆ 2³/₁₆	55 32	3¹¹/₁₆ 3⅛	350	260	263
DFXH	6-5¾x6	50-1200	5B	Var	.015	.010	.016		Die	sel						O. 124 I. 96	1¹¹/₁₆ 1¹¹/₁₆	63 42	2⅜ 2⅜	350	260	263
DFXH-f	6-5¾x6	50-1200	19B	Var	.014	.010	.016		Die	sel						O. 124 I. 96	1¹¹/₁₆ 1¹¹/₁₆	63 42	2⅜ 2⅜	350	260	263

+—Connecting rod ½ in. *—Center and rear. ††—Connecting rod ⅞ in. ***—Connecting rod ⅞ in. **—Front and intermediate. †—Babbitt. a—Front, center and rear. b—Intermediate. c—75 ft. lbs. on row of screws on manifold side; 85 ft. lbs. on all others; 65 ft. lbs. when studs are used. d—75 ft. lbs. on row of screws on manifold side; 85 ft. lbs. on all others; 60 ft. lbs. when studs are used. II—Inner. O.—Outer. f—Horizontal type engine. n—Varies with compression ratio.

• WAUKESHA MODEL No.

TUNE UP

MODEL No.	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After °TC	Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted) Intake	Exhaust	Spark Plug Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed
WAUKESHA															
190 GL	6-3¼x4	12-15*	8B	3B	.010			Opt		18mm	.025	.018	Var	Var	
195 GKA	6-4¼x4	40*	18B		.010	.010C	.014C	Opt		18mm	.025	.018	Var	Var	110
6 MZA	6-4¼x4¾	40-1500	8B	3B	.008	.009C	.019C	Opt		18mm	.025	.018	Var		110
135 GKB	6-4¼x5	30-1800	5A		.012	.011C	.023C	Opt		18mm	.025	.018	Var		120
135 GZB	6-4⅝x5	30-1800	5A		.012	.011C	.023C	Opt		18mm	.025	.018	Var		120
140GK	6-4½x5½	40*	15B	5B		.013C	.019C	Opt		Opt	.025	.018	Var	Var	
140 GKB	6-4½x5½	40*	15B	5B		.013C	.025C	Opt		Opt	.025	.018	Var	Var	
6 SRKR	6-4⅝x5½	40-1500	8A	3A	.004	.019C	.025C	Opt		⅞	.025	.018	Var		90
140 GZB	6-4⅝x5½	40*	15B	5B		.013C	.025C	Opt		Opt	.025	.018	Var	Var	
145 GK	6-5¼x6	40*	15B	6B		.013C	.025C	Opt		Opt	.025	.018	Var	Var	
145 GBK	6-5¼x6	40*	15B	6B		.013C	.024C	Opt		Opt	.025	.018	Var	Var	
145 GZ	6-5⅝x6	40*	15B	6B		.016C	.022C	Opt		Opt	.025	.018	Var	Var	
6 WAKB	6-6¼x6½	40-1500	TC	TC	.012	.019C	.026C	Opt		18mm	.025	.018	Var		85
190 DLCA	6-3⅝x4	15-1500	8B		.010	.010C	.016C		Die	sel					375
195 DLCA	6-4x4	30-2000	8B		.010	.010C	.016C		Die	sel					375
135 DKB, 135 DKBS	6-4¼x5	40-2200	5A		.012	.011C	.023C		Die	sel					450
148 DKB, 148 DKBS	6-5¼x6	40-1500	10B		.012	.015C	.028C		Die	sel					435
6 WAKD, 6 WAKDS	6-6¼x6½	40-1300	TC	TC	.012	.014C	.024C		Die	sel					450

VALVE SPRINGS

MODEL No.	Valve Open Average Pressure (Lb.)	Valve Open Length (In.)	Valve Closed Average Pressure (Lb.)	Valve Closed Length (In.)
WAUKESHA				
190 GL	71	1¹³/₁₆	48	1¹¹/₁₆
195 GKA	124±10	1¹³/₁₆	46±4	2¹¹/₁₆
6 MZA	101	1¹³/₁₆	64	2¹¹/₁₆
135 GKB	162±8	1¹³/₁₆	82±4	2⅛
135 GZB	162±8	1¹³/₁₆	82±4	2⅛
140GK	O. 86 I. 55	1¾ 1⅞	31 26	2⅛ 1¹³/₁₆
140 GKB	O. 127 I. 70	1¾ 1⅞	67 30	2⅛ 1¹³/₁₆
6 SRKR	101	2¹³/₁₆	66	2¹³/₁₆
140 GZB	O. 127 I. 70	1¾ 1⅞	67 30	2⅛ 1¹³/₁₆
145 GK	O. 118	2⅝	48	2¹¹/₁₆
	I. 81	2⅛	32	2¹¹/₁₆
145 GBK	O. 158	2⅝	67	2¹¹/₁₆
	I. 100	2⅛	42	2¹¹/₁₆
145 GZ	O. 118	2⅝	48	2¹¹/₁₆
	I. 81	2⅛	32	2¹¹/₁₆
6 WAKB	100	3⅛	90	3⅛
190 DLCA	71±6	1¹³/₁₆	48±4	1¹¹/₁₆
195 DLCA	124±10	1¹³/₁₆	46±4	2¹¹/₁₆
135 DKB, 135 DKBS	162	2⅛	82	2¹¹/₁₆
148 DKB, 148 DKBS	O. 118	2⅝	48±4	2¹¹/₁₆
	I. 81	2⅛	32±3	2¹¹/₁₆
6 WAKD, 6 WAKDS	O. 140	2¹¹/₁₆	50±3	3¹¹/₁₆
	I. 139	2½	56±4	3⅛

TENSIONS

MODEL No.	Cylinder Head (Lb.-Ft.)	Main Bearings (Lb.-Ft.)	Connecting Rod Bearings (Lb.-Ft.)
WAUKESHA			
190 GL	92-100	109-113	44-50
195 GKA	92-100	109-113	75-77
6 MZA	73-75	96-100	67-69
135 GKB	175	129-133	96-100
135 GZB	175	129-133	96-100
140GK	175	129-133	96-100
140 GKB	175	129-133	96-100
6 SRKR	73-75	129-133	96-100
140 GZB	175	129-133	96-100
145 GK	175 Long 150 Short	267-275	67-69
145 GBK	175 Long 150 Short	267-275	67-69
145 GZ	200 Long 175 Short	267-275	67-69
6 WAKB	140-150	292-300	96-88
190 DLCA	96-100	100-113	67-69
195 DLCA	96-100	100-113	67-69
135 DKB, 135 DKBS	100-133	133-135	86-90
148 DKB, 148 DKBS	250-267	292-300	67-69
6 WAKD, 6 WAKDS	250-267	292-300	92-96

I.—Inner. O.—Outer. *—At governed speeds. C—Cold.

COMPONENT PARTS

For additional truck data see Specifications Table, Page 151 Bus Specifications Page 148

• KEY TO ABBREVIATIONS AND REFERENCES •

FOOTNOTES

(1)—Shuler and Eaton.
(2)—Timken and Eaton.
(3)—Shuler and Timken or Eaton.
(4)—Shuler and Timken.
(5)—Integral with carburetor.
(6)—Loadmaster engine available as optional equipment.
(8)—Delco-Remy starter, Electric Auto-Lite generator.
(9)—Auto-Lite generator, Leece-Neville starter.
(11)—DeLuxe and Cuno.
(12)—Any of these engines optional on any model.
(13)—Continental, Hercules, Hall-Scott and Buda engines available in certain Sterling chassis.
(14)—Integral with motor.
(15)—Starter, D-R; Generator, AL.
(16)—Warner or Clark.
(17)—Parish or Alcoa.
(18)—School Bus.
(19)—AC or United.
(20)—Transmission band with 4-speed transmission optional.
(21)—Transmission disc optional.
(22)—RP7004468 with Loadmaster, RP7005140 with Jobmaster.

MAKES OF UNITS

A—American.
A-B—American Bosch Corp.
AC—AC Spark Plug Co.
A-D—Auto-Lite or Delco.
Air—Airtex.
AL—Electric Auto-Lite Co.
AM—Air Maze Corp.
AmL—American Lub.
AmC—American Chain & Cable Co.
AOS—A. O. Smith Co.
Aub—Auburn Clutch Company.
A-W—Auto-Lite or Willard.
B-Al—Budd or Aluminum.
BaB—Ball and Ball.
B&B—Borg & Beck Div.
BD—Budd or Dayton.
Bdm—Budd, Dayton or Motor Wheel.
Bdd—Budd Wheel Company.
Ben—Bendix Products Div.
BgW—Borg-Warner.
B-K—Budd or Kelsey-Hayes.
Bla—Blackstone Corp.
Bld—Blood Bros. Machine Co.
B-L—Brown-Lipe (Spicer Mfg. Div.).
B-M—Budd or Motor Wheel.
Bos—American Bosch Corp.
Br—Brown.
B-S—Bendix-Stromberg.
Bud—Buda Co.
BW—Bendix-Westinghouse.
Car—Carter Carburetor Corp.
C-B—Clark or Budd.
Cla—Clark Equipment Co.
Col—Coleman.
Con—Continental Motors Corp.
CS—Cleveland Steel Products Co.
Cum—Cummins Engine Co.
Day—Dayton Steel Foundry Co.
DD—Detroit Diesel.
DeL—DeLuxe Products Corp.
Det—Detroit Steel Products Co.
Dol—Dollinger Corp.
D-M—Dayton or Motor Wheel.
D-R—Delco-Remy Div.
DS—Detroit or Standard.
Eat—Eaton Mfg. Co.
Ens—Ensign Carburetor Co.
Eri—Erie Malleable Iron Co.
Exi—Exide (Electric Storage Battery Co.).
F—Firestone ring.
Fed—Fedders-Quigan Corp.
Frd—Ford Motor Co.
Ful—Fuller Mfg. Co.
Gem—Gemmer Mfg. Co.
Gl—Globe-Union, Inc.
GO—G & O Mfg. Co.
Han—Handy (King-Seeley Corp.).
Har—Harrison Radiator Div.
H-B—Harrison or Blackstone.
Her—Hercules Motor Corp.
HH—Houdaille-Hershey.
Hof—Hoof Products Co.
Hol—Holley Carburetor Co.
H-S—Hall-Scott Motor Car Co.
I.E.—Internal expansion.
IHC—International Harvester Co.
Inl—Inland Mfg. Div.
Int—Integral.
Jms—Jamestown Metal Equipment Co.
K-H—Kelsey-Hayes.
Khm—Kelsey-Hayes or Motor Wheel.
K-S—King-Seeley Corp.
Li—Liggett.
L-N—Leece-Neville Corp.
Lng—Long Mfg. Div.
L-R—Lipe Rollway Corp.
WCL—W. C. Lipe.
Lub—Luber-Finer, Inc.
Mal—Mallory Electric Corp.
Mar—Maremont Auto. Prod., Inc.
Mat—Mather Spring Co.
McC—McCord Radiator & Mfg. Co.
Mic—Michiana Products Corp.
Mid—Midland Steel Products Co.
Mod—Modine Mfg. Co.
Mur—Murray Corp. of America.
MW—Motor Wheel Corp.
Nat—National Battery Co.
NEP—New England Products.
NP—New Process Gear.
Nug—Wm. W. Nugent Co.
Or—Orschelin.
Oak—Oakes North Chicago Div.
Par—Parish (Spicer Mfg. Div.).
Pce—Pierce Governor Co.
Pfx—Perfex Corp.
P-G—Perfex or General Interchangeable
PL—Presto-Lite.
PS—Propeller Shaft.
Pur—Purolator Products, Inc.
Ro—Ross Gear & Tool Co.
Roc—Rockford Clutch Div.
RP—Rochester Products.
Sag—Saginaw Steering Gear Div.
Ser—Service Spring Co.
Sol—Solar.
Spi—Spicer Mfg. Div.
SS—Standard Steel Spring Co.
Til—Tillotson Mfg. Co.
Tim—Timken-Detroit Axle Co.
T-S—Tru-Stop (Amer. Chain & Cable).
Tut—Tuthill Spring Co.
Uni—United Air Cleaner Div.
UP—Universal Products Co.
US—United States Spring & Bumper Co.
Var—Various.
Vor—Vortex Mfg. Co.
Wag—Wagner Electric Corp.
Wal—Walker.
War—Warner Gear Div.
Wau—Waukesha Motor Co.
WCL—W. C. Lipe (Lipe Rollway Corp.).
WGB—W-G-B Oil Clarifier, Inc.
Wil—Willard Storage Battery Co.
Win—Winslow Eng. Co.
Wys—Willys-Overland Motors, Inc.
Yng—Young Radiator Co.
Zen—Zenith Carburetor Div.
†—Core only.
‡—Spicer 002068.
*—A.C. Mech. and Autopulse Dual.
**—Own front universal joint.
°—Specifications same. Engine HRBB6
‡—Or Orschelin.
§—Studebaker units also available.

Line Number	TRUCK MAKE AND MODEL NUMBER	POWER PLANT ACCESSORIES: ENGINE Make and Model	Governor Make—(if Standard)	Air Cleaner Make—(if Standard)	Oil Filter Make—(if Standard)	CARBURETOR Make and Model Number	Fuel Feed System Make	Radiator Make	ELECTRICAL EQUIPMENT: Ignition System Make	Generator—Starter Make	Battery—Make	CLUTCH Make and Model Number	UNIVERSALS Make and Model Number	RUNNING GEAR: STEERING GEAR Make and Model Number	Hand Brakes Make & Tyne	Brake Drum Make	Wheels—Make	Springs—Make	Frame—Make
	BROCKWAY																		
1	88WH	Con 38B		Uni		Zen 63AW12	Air	GO	AL	AL	Exi	LR-13	Spi 1410	Ro TA14	War	Tim	Bdd	Eat	Pr
2	128W	Con 40B		Uni		Zen 63AW14	Air	GO	AL	AL	Exi	LR-13	Spi 1410	Ro TA14	TS	Tim	Bdd	Eat	Pr
3	146W	Con 40B		Uni	WGB	Zen 63AW14	Air	GO	AL	AL	Exi	LR-13	Spi 1500	Ro TA86	TS	Tim	Bdd	Eat	Pr
4	148W, 148BB	Con 42BX	KS	Uni	WGB	Zen 63AW16	Air	GO	AL	AL	Exi	LR-14	Spi 1500	Ro TA86	TS	Tim	Bdd	Eat	Pr
5	151W	Con 42BX	KS	Uni	WGB	Zen 63AW16	Air	GO	AL	AL	Exi	LR-14	Spi 1500	Ro TA66	TS	4	Bdd	Eat	Pr
6	152W	Con 42BX	KS	Uni	WGB	Zen 63AW16	Air	GO	AL	AL	Exi	LR-14	Spi 1500	Ro TA71	TS	1	Bdd	Eat	Pr
7	152BB	Con 42BX	KS	Uni	WGB	Zen 63AW16	Air	GO	AL	AL	Exi	LR-14	Spi 1500	Ro TA71	TS	4	Bdd	Eat	Pr
8	153W	Con 42BX	KS	Uni	WGB	Zen 63AW16	Air	GO	AL	AL	Exi	LR-14	Spi 1500	Ro TA71	TS	4	Bdd	Eat	Pr
9	153BB	Con 42BX	KS	Uni	WGB	Zen 63AW16	Air	GO	AL	AL	Exi	LR-14	Spi 1500	Ro TA71	TS	4	Bdd	Eat	Pr
10	154W	Con 42BX	KS	Uni	WGB	Zen 63AW16	Air	GO	AL	AL	Exi	LR-14	Spi 1500	Ro TA71	TS	2	Bdd	Eat	Pr
11	154WH, 154WHS	Con 46B	Novi	Uni	Mic	Zen 63AW16	Air	GO	AL	AL	Exi	LR-14	Spi 1500	Ro TA66	TS	2	Bdd	Eat	Pr
12	154WHL	Con 46B	Novi	Uni	Mic	Zen 63AW16	Air	GO	AL	AL	Exi	LR-15	Spi 1600	Ro TA66	TS	Tim	Bdd	Eat	Pr
13	260XL	Con 46B	Novi	Uni	Mic	Zen 63AW16	Air	GO	AL	AL	Exi	LR-14	Spi 16[illegible]	Ro TA71	TS	Tim	Bdd	Eat	Pr
14	260XLBB	Con 46B	Novi	Uni	Mic	Zen 63AW16	Air	GO	AL	AL	Exi	LR-14	Spi 1500	Ro TA71	TS	Tim	Bdd	Eat	Pr
15	260XW	Con 48B	Novi	Uni	Mic	Zen 63AW16	Air	GO	AL	AL	Exi	LR-15	Spi 1600	Ro TA71	TS	2	Bdd	Eat	Pr
16	260XWL	Con 48B	Novi	Uni	Mic	Zen 63AW16	Air	GO	AL	AL	Exi	LR-15	Spi 1600	Ro TA71	TS	Tim	Bdd	Eat	Pr
	CHEVROLET																		
17	D-54	O-BF 115		AC	AC	RP 7005921	AC	Har	DR	DR	DR	Own	Own	Sag	Own	Own	B-K	Own	Own
18	H, J, L, N, P, R	O-T/Master		AC	AC	RP 7004468	AC	Har	DR	DR	DR	Own	Spi	Sag	Own	Own	B-K	Own	Own
19	K, M and c.o.e. models	O-L/Master		AC	AC	Car BBI-871SB	AC	Har	DR	DR	DR	Own	Spi	Sag	Own	Own	B-K	Own	Own
20	SV-SX, V-Z	O-L/Master		AC	AC	(22)	AC	Har	DR	DR	DR	Own	Spi	Sag	Own	Own	B-K	Own	Own
	CORBITT																		
21	G101	Con M6330	Zen	Uni	Fram	Zen 63AW12R	AC	Pfx	DR	DR	Exi	LR-13	Spi 1500	Ro TA66	Ful	Day	Day	Mar	Pr
22	G302	Con B6427	K-S	Uni	Con	Zen 28ADA	AC	Pfx	DR	DR	Exi	LR-14	Spi 1500	Ro TA66	Ful	Day	Day	Mar	Pr
23	G402-G452	Con T6427	K-S	Uni	Con	Zen 28ADA	AC	Pfx	DR	DR	Exi	LR-14	Spi 1600	Ro TA66	Ful	Day	Day	Mar	Pr
24	G601	Con R6513	Con	Uni	Mic	Zen 29W16	AC	Pfx	DR	DR	Exi	LR-15	Spi 1700	Ro TA70	Own	Day	Day	Mar	Pr
25	G602	Con R6572	Con	Uni	Mic	Zen 29W16	AC	Pfx	DR	DR	Exi	LR-15	Spi 1700	Ro TA70	Own	Day	Day	Mar	Pr
26	G603	Con R6602	Con	Uni	Mic	Zen 29W16	AC	Pfx	DR	DR	Exi	LR-15	Spi 1700	Ro TA70	Own	Day	Day	Mar	Pr
27	G803	Wau 145GKB	Wau			Zen 29W16	AC	Pfx	DR	DR	Exi	LR-240SX	Spi 1700	Ro TA71	Own	Day	Day	Mar	Pr
28	D401	Her DWXD	Her	AM	Pur		A-B	Pfx		DR	Exi	LR-14	Spi 1600	Ro TA66	Ful	Day	Day	Mar	Pr
29	D406, D456	Wau 135DKBS	Wau					Pfx		DR	Exi	LR-14	Spi 1600	Ro TA70	Own	Day	Day	Mar	Pr
30	D404, D454	Cum JBS600	Cum	Uni	Cum		Cum	Pfx		DR	Exi	LR-14	Spi 1600	Ro TA70	Own	Day	Day	Mar	Pr
31	D802	Cum HRB600	Cum	Uni	Lub		Cum	Pfx		DR	Exi	LR-240SX	Spi 1700	Ro TA71	Own	Day	Day	Mar	Pr
32	D803	Cum NHB600	Cum	Uni	Lub		Cum	Pfx		DR	Exi	LR-240SX	Spi 1700	Ro TA71	Own	Day	Day	Mar	Pr
33	D806	Cum HRBB600	Cum	Uni	Lub		Cum	Pfx		DR	Exi	LR-240SX	Spi 1700	Ro-TA71	Own	Day	Day	Mar	Pr

A Compilation of Standard Model Data Submitted by Truck Manufacturers

Line Number	TRUCK MAKE AND MODEL NUMBER	POWER PLANT ACCESSORIES: ENGINE Make and Model	Generator Make—(If Standard)	Air Cleaner Make—(If Standard)	Oil Filter Make—(If Standard)	CARBURETOR Make and Model Number	Fuel Feed System Make	Radiator Make	ELECTRICAL EQUIPMENT: Ignition System Make	Generator—Starter Make	Battery—Make	CLUTCH Make and Model Number	UNIVERSALS Make and Model Number	RUNNING GEAR: STEERING GEAR Make and Model Number	Hand Brakes Make & Type	Brake Drum Make	Wheels—Make	Springs—Make	Frame—Make
	DIAMOND T																		
34	323, 323C	Nash DT-252		Uni	Wal	Car YH895S	Car	Own	DR	DR	AL	B&B 11A6	Spi 1350	Ro TA54	War	Var	Var	Own	Own
35	422, 522	Con K series	K-S	Uni	Mic	Zen 28ADA	AC	Own	AL	AL	AL	B&B 11A6	Spi 1400	Ro	War	Var	Var	Own	Own
36	422C, 522C	Con K series	K-S	Uni	Mic	Zen 28ADA	AC	Own	AL	AL	AL	B&B 12E	Spi 1400	Ro	War	Var	Var	Own	Own
37	622, 622C	Con K series	K-S	Uni	Mic	Zen 28ADA	AC	Own	AL	AL	AL	Roc 14TT	Spi 1500	Ro	Cla	Var	Var	Own	Own
38	660, 720	Con T series	K-S	Uni	Mic	Zen 28ADA	AC	Own	AL	AL	AL	Roc 14TT	Spi 1500	Ro TA66	Cla	Var	Var	Own	Own
39	720C	Con T series	K-S	Uni	Mic	Zen 28ADA	AC	Own	AL	AL	AL	Roc 14TT	Spi 1500	Ro TA66	Cla	Var	Var	Own	Own
40	722	Her TDXB	Pce	Uni	Mic	Zen 28ADA	AC	Own	AL	AL	Exi	L-R 14ML	Spi 1600	Ro TA66	TS	Var	Var	Own	Own
41	920	Con R series	Pce	Uni	Mic	Zen 29	AC	Own	AL	AL	AL	Roc 15TT	Spi 1600	Ro 7A71	TS	Var	Var	Own	Own
	DODGE																		
42	C-1-B6	Own T-334		Uni		BaB DTE-2		Bla	AL	AL	AL	B&B 12289	Spi 1260	Gem 3D-305	Own	Own	Bdd	Det	Mid
43	C-1-C6	Own T-336		Uni		BaB DTE-2		Bla	AL	AL	AL	B&B 12825	Spi 1260	Gem 3D-305	Own	Own	Bdd	Det	Mid
44	C-1-D6	Own T-338		Uni		BaB E7-T2		Bla	AL	AL	AL	B&B 12825	UP 5160	Gem 3D-305	Own	Own	Bdd	Det	Mid
45	C-1-D6 (F.C.)	Own T-362		Uni		BaB E7-T2		Bla	AL	AL	AL	B&B 12825	UP 5160	Gem 3D-305	Own	Own	Bdd	Det	Mid
46	C-1-PW6	Own T-137	Han	Uni		BaB E7-T2		Fed	AL	AL	AL	B&B 11828	UP 5160	Gem B-60	Own	Own	Bdd	Det	Mid
47	C-1-DU6	Own T-164		Uni		BaB E9-H-1		Jms	AL	AL	AL	B&B 12825	UP 5160	Gem 3A-305	Own	Own	Bdd	Det	Mid
48	C-1-EU6	Own T-165		Uni		BaB E9-H-1		Jms	AL	AL	AL	B&B 11830	UP 5160	Gem B-60	Own	Own	Bdd	Det	Mid
49	C-1-F6	Own T-342		Uni		BaB E7-T2		Bla	AL	AL	AL	B&B 11827	CS 096	Gem 4D-335	Own	Own	Bdd	Det	Mid
50	C-1-F6 (F.C.)	Own T-364		Uni		BaB E7-T2		Bla	AL	AL	AL	B&B 11827	CS 096	Gem 4D-335	Own	Own	Bdd	Det	Mid
51	C-1-G6	Own TX-342		Uni		BaB E7-T2		Fed	AL	AL	AL	B&B 11827	CS 096	Gem 4D-335	Own	Own	Bdd	Det	Mid
52	C-1-G6	Own VTX-342	K-S	Uni		B-S 380360		Fed	AL	AL	AL	B&B 11830	CS 096	Gem 4D-335	Own	Own	Bdd	Det	Mid
53	C-1-H6	Own T-344		Uni		BaB E7-T2		Fed	AL	AL	AL	B&B 11830	CS 096	Gem 4D-335	Own	Own	Bdd	Det	Mid
54	C-1-H6	Own VT-344	K-S	Uni		B-S 380360		Fed	AL	AL	AL	B&B 11830	CS 096	Gem 4D-335	Own	Own	Bdd	Det	Mid
55	C-1-HM6	Own T-356		Uni		BaB 6N-2		Fed	AL	AL	AL	B&B 11830	CS 096	Gem 4D-335	Own	Own	Bdd	Det	Mid
56	C-1-J6	Own T-346	Han	Uni	DR	BaB E7-T2		Fed	AL	AL	AL	B&B 11830	UP 5370	Gem 4D-335	Own	Own	Bdd	Det	Mid
57	C-1-JM6	Own T-358	Han	Uni	DR	BaB 6N-2		Fed	AL	AL	AL	B&B 11830	CS 096	Gem 4D-335	Own	Own	Bdd	Det	Mid
58	C-1-J6	Own VT-346	K-S	Uni	DR	B-S 380360		Fed	AL	AL	AL	B&B 11830	UP 5370	Gem 4D-335	Own	Own	Bdd	Det	Mid
59	C-1-K6	Own TX-346	Han	Uni	Pur	BaB E7-T2		Fed	AL	AL	AL	B&B 11830	UP 5370	Gem 4D-355	Own	Own	Bdd	Det	Mid
60	C-1-KMA6	Own TX-358	Han	Uni	DR	BaB 6N-2		Fed	AL	AL	AL	B&B 11830	UP 5370	Gem 4D-335	Own	Own	Bdd	Det	Mid
61	C-1-K6	Own VTX-346	K-S	Uni	Pur	B-S 380360		Fed	AL	AL	AL	B&B 11830	UP 5370	Gem 4D-335	Own	Own	Bdd	Det	Mid
62	C-1-R6	Own VT-348	Han	AC	DR	Car E9-X1		Fed	AL	AL	AL	B&B 11732	CS D96	Gem 4D-335	Own	Own	Day	Det	Mid
63	C-1-T6	Own VT-350	Han	AC	DR	Car BBD907S		Fed	AL	AL	AL	B&B 11733	CS U96	Gem 5D-375	Own	Own	Day	Det	Mid
64	C-1-V6	Own VTX-350	Han	AC	DR	Car BBD907S		Fed	AL	AL	AL	B&B 11733	CS U96	Gem 5D-375	Own	Own	Day	Det	Mid
65	C-1-Y6	Own T-352	Han	AC	DR	BaB E9-G1		Bla	AL	AL	AL	B&B 11927	CS U96	Ro TA-66	Own	Own	Day	Det	Mid
66	C-1-YX6	Own T-353	Han	AC	DR	BaB E9-G1		Bla	AL	AL	AL	B&B 11927	CS C96	Ro TA-66	Own	Own	Bdd	Det	Mid
67	C-1-FS6 (18)	Own TS-342		Uni		BaB E7-T2		Bla	AL	AL	AL	B&B 11827	CS 096	Gem AD335	Own	Own	Bdd	Det	Mid
68	C-1-HS6 (18)	Own TS-344		Uni		BaB E7-T2		Fed	AL	AL	AL	B&B 11830	CS 096	Gem AD335	Own	Own	Bdd	Det	Mid
69	C-1-JS6 (18)	Own TS-346	Han	Uni	DR	BaB E7-T2		Fed	AL	AL	AL	B&B 11830	UP 5370	Gem AD335	Own	Own	Bdd	Det	Mid
70	C-1-RS6 (18)	Own VTS-348	Han	Uni	DR	Car BBD907S		Fed	AL	AL	AL	B&B 11732	CS D96	Gem AD335	Own	Own	Day	Det	Mid
	DUPLEX																		
71	TH	Her JXD	Pce	AM	Mic	Zen 28AV11	AC	Own	AL	AL	Wil	B&B 13 in.	Spi 1500	Ro TA27072		Tim	MW	Tut	Own
72	TH338	Her JXLD	Pce	AM	Mic	Zen 29W14	AC	Own	AL	AL	Wil	B&B 13 in.	Spi 1500	Ro TA27121		Tim	MW	Tut	Own
73	GR-6X4	Con 6427	K-S	AM	Mic	Zen 28ADA10	AC	Own	AL	AL	AL	B&B 13E	Spi 1600	Ro TA66	Own	Day	Day	Tut	Own
74	RH	Her WXLC3	Pce	AM	Mic	Zen 28AV12	AC	Own	AL	AL	AL	B&B 13 in.	Spi 1600	Ro TA67061		Tim	MW	Tut	Own
75	KH, JH	Her RXC	Pce	AM	Mic	Zen IN167SJ	AC	Own	AL	AL	AL	B&B 14 in.	Spi 1600	Ro TA72243		Tim	MW	Tut	Own
76	SH501	Her RXB	Pce	AM	Mic	Zen IN167SJ	AC	Own	AL	AL	AL	B&B 14 in.	Spi 1600	Ro TA72243		Tim	MW	Tut	Own
77	LH	Her RXLD	Pce	AM	Mic	Zen IN167SJ	AC	Own	AL	AL	AL	LR 15 in.	Spi 1700	Ro TA72152		Tim	MW	Tut	Own
	FEDERAL																		
78	1800 Series	Her JXBF		Uni	Pur	Car		AC	Lng	DR	DR	AL	B&B 11 in.	Spi 1300	Gem 335	War	D,M	BD	Det	Par
79	2500 Series	Her JXCF		Uni	Fram	Car		AC	Lng	DR	DR	AL	B&B 12 in.	Spi 1400	Gem 335	War	D,M	BD	Det	Par
80	2900 Series	Her JXDF	K-S	Don	Fram	Car		AC	Lng	DR	DR	AL	B&B 12 in.	Spi 1500	Gem 335-3	Cla	D,M	BD	Det	Par
81	3000 Series	Her JXLDF	K-S	Don	Fram	Car		AC	Lng	DR	DR	AL	B&B 12 in.	Spi 1500	Gem 335-3	Cla	D,M	BD	Det	Par
82	3400 Series	Con T6371	K-S	Don	Mic	Zen		AC	Lng	DR	DR	AL	B&B 13 in.	Spi 1500	Gem 375	Cla	D,M	BD	Det	Par
83	4400, 4500, 5500 Series	Con T6427	K-S	Don	Mic	Zen		AC	Lng	DR	DR	Exi	L-R 14 in.	Bid 1600	Gem 400	T-S	D,M	BD	Det	Par
84	6000 Series	Con U6501	Zen	Don	Mic	Zen		AC	Lng	DR	DR	Exi	L-R 14 in.	Bid 1600	Gem 500	T-S	D,M	BD	Det	Par
85	6500 Series	Con R6602	Con	Don	Mic	Zen		AC	Lng	DR	DR	Exi	L-R 15 in.	Bid 1700	Gem 500	T-S	D,M	BD	Det	Par
86	6451, 6454 Series	Con T6427F	K-S	Don	Mic	Zen		AC	Lng	DR	DR	Exi	L-R 14 in.	Bid 1600	Gem 400	T-S	BD	BD	Det	Par
87	6554, 6654 Series	Con R6602	Con	Don	Mic	Zen		AC	Lng	DR	DR	Exi	L-R 15 in.	Bid 1700	Gem 500	T-S	BD	Bdd	Det	Par
	FORD																		
88	F100 through F900 Series	Own	Own	Own	Own	Own	Own	Own	Own	Own	Own	Own	Own	Own	Own	Own	Own	Own	Own	Own
	FWD																		
89	LD	Her QXLD3	Hof	US		Zen 28AV11	AC	Mod	AL	DR	AL	B&B LD11	Spi 1410	Ro TA14	Own‡	Tim	Bdm	Own	Own
90	HA	Wau 195GKA	Wau	Don	Fram	Zen IN167SJ	AC	Pfx	DR	DR	Wil	WCL H13	Bid 5N	Ro TA66	Own‡	Own	Own	Own	Own
91	HAY	Wau 195GKA	Wau	Don	Fram	Zen IN167SJ	AC	Pfx	DR	DR	Wil	WCL H13	Bid 5N	Ro TA66	Own‡	Own	Own	Own	Own
92	HR	Wau MZA	Wau	Don	Fram	Zen IN167SJ	AC	Pfx	DR	DR	Wil	WCL H14	Bid 5N	Ro TA66	Own‡	Own	Own	Own	Own
93	HRY	Wau MZA	Wau	Don	Fram	Zen IN167SJ	AC	Pfx	DR	DR	Wil	WCL H14	Bid 5N	Ro TA66	Own‡	Own	Own	Own	Own
94	HRC	Wau 140GKB	Wau	Don	Fram	Zen 29W14	AC	Pfx	DR	DR	Wil	WCL H15	Bid 5N	Ro TA66	Own‡	Own	Own	Own	Own
95	HG	Wau MZA	Wau	Don	Fram	Zen IN167SJ	AC	Pfx	DR	DR	Wil	WCL H14	Bid 5N	Ro TA66	Own‡	Own	Own	Own	Own
96	HGY	Wau MZA	Wau	Don	Fram	Zen IN167SJ	AC	Pfx	DR	DR	Wil	WCL H14	Bid 5N	Ro TA66	Own‡	Own	Own	Own	Own
97	SU	Wau SRKR	Wau	Don	Fram	Zen IN167SJ	AC	Pfx	DR	AL	Wil	B-L U14	Bid 6N	Ro TW74	Own	Own	Own	Own	Own
98	YUD	GMC 471	GMC	Don	Fram		GMC	Pfx	DR	DR	Wil	WCL U15	Bid 6N	Ro TW74	Own	Own	Own	Own	Own
99	AU	Wau 140GZ	Wau	Don	Fram	Zen 129-16	AC	Pfx	DR	DR	Wil	WCL U15	Bid 6N	Ro TW74	Own	Own	Own	Own	Own
100	YU	Wau 140GK	Wau	Don	Fram	Zen 29W	AC	Pfx	DR	DR	Wil	WCL U15	Bid 6N	Ro TW74	Own	Own	Own	Own	Own
101	YUD	GMC 471	GMC	Don	Fram		GMC	Pfx	DR	DR	Wil	WCL U15	Bid 6N	Ro TW74	Own	Own	Own	Own	Own
102	ZU	Wau 140GZ	Wau	Don	Fram	Zen 129-16	AC	Pfx	DR	DR	Wil	WCL U15	Bid 6N	Ro TW74	Own	Own	Own	Own	Own
103	ZUD	GMC 671	GMC	Don	Fram		GMC	Pfx	DR	DR	Wil	WCL U15	Bid 6N	Ro TW74	Own	Own	Own	Own	Own
104	M7G	Wau 145GK	Wau	Don	Fram	Zen 129W16	AC	Pfx	DR	DR	Wil	WCL M15	Bid 7N	Ro TW74	Own	Tim	Bdm	Own	Own
105	M7D	Cum HRBB	Cum	Don			Cum	Pfx	DR	DR	Wil	B-L M14	Bid 7N	Ro TW74	Own	Tim	Bdm	Own	Own
106	M10G	Wau 145	Wau	Don	Fram	Zen 129W16	AC	Pfx	DR	DR	Wil	WCL M15	Bid 7N	Ro TW74	Own	Tim	Bdm	Own	Own
107	M10D	Cum HRBB	Cum	Don			Cum	Pfx	DR	DR	Wil	B-L M14	Bid 7N	Ro TW74	Own	Tim	Bdm	Own	Own
108	H6X6G	Wau MZA	Wau	Don	Fram	Zen IN167SJ	AC	Pfx	DR	DR	Wil	WCL H14	Bid 5N	Ro TA66	Own‡	Own	Own	Own	Own
109	HC6X6G	Wau 140GXB	Wau	Don	Fram	Zen 29W	AC	Pfx	DR	DR	Wil	WCL H15	Bid 5N	Ro TA66	Own‡	Own	Own	Own	Own
110	HC6X6D	GMC 471	GMC	Don	Fram	Zen 29W	GMC	Pfx	DR	DR	Wil	WCL H15	Bid 5N	Ro TA66	Own‡	Own	Own	Own	Own
111	HCY6X6G	Wau 140GKB	Wau	Don	Fram	Zen 29W	AC	Pfx	DR	DR	Wil	WCL H15	Bid 5N	Ro TA66	Own‡	Own	Own	Own	Own
112	HCY6X6D	GMC 471	GMC	Don	Fram	Zen 29W	GMC	Pfx	DR	DR	Wil	WCL H15	Bid 5N	Ro TA66	Own‡	Own	Own	Own	Own

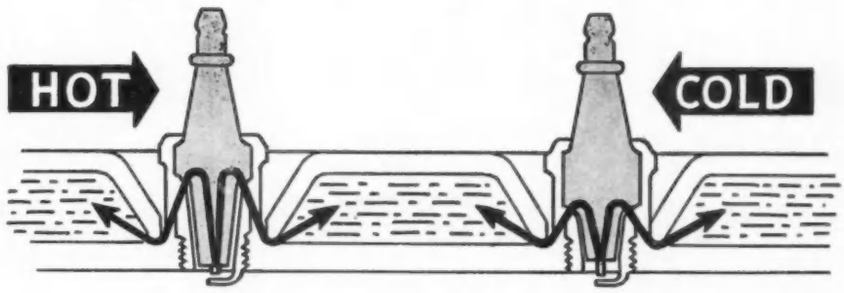
COMPONENT PARTS Continued from Page 109

Line Number	TRUCK MAKE AND MODEL NUMBER	POWER PLANT ACCESSORIES: ENGINE Make and Model	Governor Make—(If Standard)	Air Cleaner Make—(If Standard)	Oil Filter Make—(If Standard)	CARBURETOR Make and Model Number	Fuel Feed System Make	Radiator Make	ELECTRICAL EQUIPMENT: Ignition System Make	Generator—Starter Make	Battery—Make	CLUTCH Make and Model Number	UNIVERSALS Make and Model Number	RUNNING GEAR: STEERING GEAR Make and Model Number	Hand Brakes Make & Type	Brake Drum Make	Wheels—Make	Springs—Make	Frame—Make
	FWD-(Cont'd)																		
113	MU6X6G	Wau 145GK	Wau	Don	Fram	Zen 129W16	AC	Pfx	DR	DR	Wil	WCL H15	Bld 6N	Ro TW74	Own	Own	Own	Own	Own
114	MU6X6D	GMC 671	GMC	Don	Fram	Zen 129W16	GMC	Pfx	DR	DR	Wil	WCL H15	Bld 6N	Ro TW74	Own	Own	Own	Own	Own
115	M6X6G	Wau 145GK	Wau	Don	Fram	Zen 129W16	AC	Pfx	DR	DR	Wil	WCL H15	Bld 7N	Ro TW74	Own	Own	Bdm	Own	Own
116	M6X6D	Cum HRBB	Cum	Don	.....	.....	Cum	Pfx	DR	DR	Wil	WCL H15	Bld 7N	Ro TW74	Own	Own	Bdm	Own	Own
	KENWORTH																		
117	521, 522, 523, 524, 548, 552, 584, 825	Cum HB600	Cum	Don	Nug	.....	Cum	Pfx	.....	DR	Exi	B-L 14 Sngl.	Spi 1700	Gem 500	T-S	Tim	Bdd	Own	Own
118	829	Wau 140GZP	Wau	Don	Mic	Zen 29W16	AC	Pfx	DR	DR	Exi	B-L 14 Sngl.	Spi 1700	Gem 500	T-S	Tim	Bdd	Own	Own
119	888	Cum NHB	Cum	Don	Nug	.....	Cum	Pfx	.....	DR	Exi	B-L 14 Sngl.	Spi 1700	Gem 500	T-S	Tim	Bdd	Own	Own
120	851	Con R6513	.....	Don	.....	.....	.....	.....	.....	(15)	.....	WCL	.....	Gem 500	.....	.....	Bdd	Own	Own
121	853	HS 1091-G1	.....	Don	.....	.....	.....	.....	.....	(9)	.....	B-L	.....	Ben-Ro	.....	.....	Bdd	Own	Own
122	854	Con R6513	.....	Don	.....	.....	.....	.....	.....	(15)	.....	WCL	.....	Gem 500	.....	.....	Bdd	Own	Own
123	801	Cum NHB	.....	Don	.....	.....	.....	.....	.....	.....	.....	WCL	.....	Gem 500	.....	.....	Own	Own	Own
	LINN																		
124	Linn A15, A25	Her JXE3	Hof	Dol	.....	Zen 63AW10	AC	Yng	AL	AL	AL	LR 12ML	War T9	Ro TA26	War	Eri	Bdd	LI	Own
125	Linn A35, A45	Her JXC	Hof	Dol	.....	Zen 63AW10	AC	Yng	AL	AL	AL	LR 12ML	War T9	Ro TA26	War	Eri	Bdd	LI	Own
	MARMON-HERRINGTON																		
126	All Ford conversion units	Ford	Ford	Ford	Ford	Ford	Ford	Ford	Ford	Ford	Ford	Ford	Ford	Ford	Ford	Ford	Ford	Ford	Ford
127	MH610	Her WXLC3	Hof	Don	Mic	Zen 29-14	AC	Yng	DR	DR	AL	WCL	Spi 1500	Ro TA71	.....	Tim	Bdd	SS	Own
128	MH615	Her WXLC3	Hof	Don	Mic	Zen 29-14	AC	Yng	DR	DR	AL	WCL	Spi 1500	Ro TA71	.....	Tim	Bdd	SS	Own
129	MH620	Her RXLC6	Hof	Don	Mic	Zen 29-14	AC	Yng	DR	DR	AL	WCL	Spi 1600	Ro TA71	.....	Tim	Bdd	SS	Own
130	MH625	Her RXLC6	Hof	Don	Mic	Zen 29-14	AC	Yng	DR	DR	AL	WCL	Spi 1600	Ro TA71	.....	Tim	Bdd	SS	Own
131	MH630	Her RXLDH6	Hof	Don	Mic	Zen 29W16	AC	Yng	DR	DR	AL	WCL	Spi 1600	Ro TA71	.....	Tim	Bdd	SS	Own
	MILFORD																		
132	QX	Wau 6MZA	Wau	AM	Mic	Zen 63AW12	AC	Pfx	DR	DR	Exi	L-R 14ML	Bld 6N	Ro TA71	AmC	Tim	Bdd	Tut	Par
133	QY	Wau 140GK	Wau	Vor	Mic	Zen 83AW16	AC	Pfx	DR	DR	Exi	L-R 15ML	Bld 6N	Ro TW74	AmC	Tim	Bdd	Tut	Par
	OSHKOSH																		
134	W214, 314, 414	Con B6427	K-S	Don	Cen	Zen 28ADA10	AC	Own	DR	DR	Wil	LR 14SP	.....	.....	Own	.....	.....	.....	Par
135	W7126X6	Her RXLDH	Pce	Don	Mic	Zen 29-D-13	AC	Own	AL	DR	Wil	LR 15SP	Spi 16, 1700	.....	Own	Tim	Bdd	.....	Par
136	W712	Her RXLDH	Pce	Don	Mic	Zen 29D13	AC	Own	AL	DR	Wil	LR 15SP	Spi 1600	.....	Own	Own	Bdd	.....	Par
137	WA906	Cum HRBB600	Cum	Don	AM	.....	Cum	Own	.....	DR	Wil	LR 15SP	Spi 1700	.....	Own	Own	Bdd	.....	Par
138	WA1600CD	Cum HB600	Cum	Don	AM	.....	Cum	Own	.....	DR	Wil	LR 15SP	Spi 17, 1800	.....	Own	.....	Bdd	.....	Par
139	W1700	Her RXC	Pce	Don	Mic	Zen 29AW14	AC	Own	DR	DR	Wil	LR 14SP	Spi 1600	.....	Own	Own	Bdd	.....	Par
140	W2211	Wau 145GKB	Wau	Don	Mic	Zen 129W16	AC	Own	DR	DR	Wil	LR 15SP	Spi 1700	.....	Own	Own	Bdd	.....	Par
141	W2400-6X6	Her RXC	Pce	Don	Mic	Zen 29AW14	AC	Own	DR	DR	Wil	LR 15SP	Spi 1600	.....	Own	.....	Bdd	.....	Par
142	W2206	HS 1091G	HS	Don	HS	Zen1510MWM2	AC	Own	DR	(9)	Wil	LR 152P	Spi 1700	.....	Own	Own	Bdd	.....	Par
143	WA2208	Cum NHB600	Cum	Don	AM	.....	Cum	Own	.....	DR	Wil	LR 15SP	Spi 1700	.....	Own	Own	Bdd	.....	Par
144	W2209	CumNHRBS600	Cum	Don	AM	.....	Cum	Own	.....	DR	Wil	LR 152P	Spi 1700	.....	Own	Own	Bdd	.....	Par
	PETERBILT																		
145	280, 350, 360	Cum NH, NHS, NHRS (12)	Cum	Don	Lub	.....	Cum	Pfx	.....	DR	Exi	B-L 14dp	Spi 1700	Ro TA71	TS	Tim	B-Al	US	Par
146	280, 350, 360, 370, 380, 390	Cum (12)	Cum	Don	Lub	.....	Cum	Pfx	.....	DR	Exi	B-L 14dp	Spi 17, 1800	Ro Gem 7D	TS	Tim	Bdd	US	Par
147	280, 350, 360, 370, 380, 390	HS1091G or B	H-S	Vor	Lub	Zen 1510MVM2	AC	Pfx	.....	A-D	Exi	B-L 14dp	Spi 17, 1800	Ro Gem 7D	TS	Tim	Bdd	US	Par
	REO																		
148	F120, F20	Own OA255	Han	Uni	Fram	Car BBR2-799S	AC	Fed	D-R	D-R	Wil	B&B 11A6	Spi 1410	Ro TA26, 54	Own	MW	MW	SS	Own
149	F20	Own OA255lpg	Han	Don	Fram	ENS XG2646	ENS	Fed	D-R	D-R	Wil	B&B 11A6	Spi 1410	Ro TA26, 54	Own	MW	MW	SS	Own
150	F120, F122, F20, F22	Own OA292	Han	Uni	Fram	Zen 28ADA10	AC	Mod	D-R	D-R	Wil	.....	Spi 14, 1500	Ro TA265470	Own	MW	Var	SS	Own
151	F122, F22, F22R, F22S, F226, F226-6X6, F226M	Own OA331	Han	Uni	Fram	Zen 28ADA10	AC	Mod	D-R	D-R	Wil	Lng CF	Spi 15, 1600	Ro TA, HP	Own	MW	Var	SS	Own
152	F22, F22R, F22S, F226, F226M, F226-6X6	Own OA331lpg	Han	AM	Fram	Ens R4472	Ens	Mod	D-R	D-R	Wil	.....	Spi 15, 1600	Ro TA, HP	Own	MW	Var	SS	Own
153	F22R, F22S, F226M, F226-6X6	Own OH160	Han	Uni	Fram	Zen 28ADA10	AC	Mod	D-R	D-R	Wil	Lng CF	Spi 15, 1600	Ro TA, HP	Own	MW	Var	SS	Own
154	F50, F50-4X4, F506, F536M	Own OH160	Han	Uni	Fram	Zen 28ADA10	AC	Mod	D-R	D-R	Wil	Lng CF	Spi 15, 1600	Ro TA, HP70	Own	MW	Var	SS	Own
155	F14, F14R	IHC SD240	Hof	Ind	DeL	Hoi 904	Car	.....	D-R	D-R	A	BgW, Cla	Spi 1350	Ro TA54	Own	MW	MW	SS	IHC
156	F23, F236	Con T6427	Han	Uni	Fram	Zen 28ADA10	AC	Mod	D-R	D-R	Wil	B&B 14	Spi 1600	Ro TA70	Own	MW	BD	SS	Own
157	F23D, F236D	Cum JBS600	.....	.....	.....	.....	.....	Mod	D-R	D-R	Wil	B&B 14	Spi 1600	Ro TA70	Own	MW	BD	SS	Own
158	F23D, F236D	Bud 6DTS468	.....	.....	.....	.....	.....	Mod	D-R	D-R	Wil	B&B 14	Spi 1600	Ro TA70	Own	MW	BD	SS	Own
	STUDEBAKER																		
159	3R5, 3R10	Own 1R	.....	Uni	.....	Car BBR1633S	AC	McC	AL	AL	Wil	B&B 9A7	Spi 1270	Ro TA12	Wag§	Bdd§	Bdd	SS	Mid
160	3R6, 3R11	Own 6R	.....	Uni	.....	CarBBR1777SA	AC	McC	DR	DR	Wil	Inl G	Spi 1270	Ro TA12	Wag§	Bdd§	Bdd	SS	Mid
161	3R14	Own 6R	.....	Uni	.....	CarBBR1777SA	AC	McC	DR	DR	Wil	Inl G	Spi 1358	Ro TA14	War§	K-H§	Bdd	SS	Mid
162	3R15	Own 2R	.....	Uni	.....	Car BBR1633S	AC	McC	AL	AL	Wil	B&B 9A7	Spi 1358	Ro TA14	War§	K-H§	Bdd	SS	Mid
163	3R16, 3R17	Own 4R	.....	Uni	Fram	CarBBR1606SA	AC	McC	DR	DR	Wil	Inl G	Spi 1358	Ro TA14	War§	MW§	MW	SS	Mid
164	3R28, 3R38	Own VT	.....	Uni	Fram	Ben AAUVP2	AC	McC	DR	DR	Wil	Inl G	Spi 1358	Ro TA14	War§	MW§	MW	SS	Mid
	WARD LA FRANCE																		
165	D1	Con T6427	Hof	Uni	Mar	Zen 29W16	AC	Pfx	AL	AL	AL	LR 14 in. SP	Bld 6N	Ro TA66	.....	Tim	Day	Mar	Own
166	D1C	Con T6427	Hof	Uni	Mar	Zen 29W16	AC	Pfx	AL	AL	AL	LR 14 in. SP	Bld 6N	Ro TA71	.....	Tim	Day	Mar	Own
167	D3, D3T8	Con R6572	Hof	Uni	Mar	Zen 29W16	AC	Pfx	AL	AL	AL	LR 15 in. SP	Spi 1700	Ro TA71	.....	Tim	Day	Mar	Own
168	D3S, D3ST8	Con R6602	Hof	Uni	Mar	Zen 29W16	AC	Pfx	AL	AL	AL	LR 15 in. SP	Spi 1700	Ro TA71	.....	Tim	Day	Mar	Own
169	D5, D5T2, D5T8	Cum HB600	.....	.....	.....	.....	.....	Pfx	.....	DR	AL	LR 15 in. SP	Spi 1700	Ro TW74	.....	Tim	Day	Mar	Own
170	D5N	Cum NHB600	.....	.....	.....	.....	.....	Pfx	.....	DR	AL	LR 15 in. SP	Spi 1700	Ro TW74	.....	Tim	Day	Mar	Own
171	D1T2	Con T6427	Hof	Uni	Mar	Zen 29W16	AC	Pfx	AL	AL	AL	LR 14 in. SP	Spi 16, 1700	Ro TA71	.....	Tim	Day	Mar	Own
172	D5R	Cum HRB	.....	.....	.....	.....	.....	.....	.....	.....	.....	LR 15SP	Spi 1700	Ro TW74	.....	Tim	Day	Mar	Own
173	D5RB	Cum HRBB	.....	.....	.....	.....	.....	.....	.....	.....	.....	LR 14-2PI	Spi 1700	Ro TW74	.....	Tim	Day	Mar	Own
174	D5RBT7	Cum HRBB	.....	.....	.....	.....	.....	.....	.....	.....	.....	LR 14-2PI	Spi 1700	Ro TW74	.....	Tim	Day	Mar	Own
175	D5RBT8	Cum HRBB	.....	.....	.....	.....	.....	.....	.....	.....	.....	LR 14-2PI	Spi 1700	Ro TW74	.....	Tim	Day	Mar	Own
176	D5RT2	Cum HRB	.....	.....	.....	.....	.....	.....	.....	.....	.....	LR 15SP	Spi 1700	Ro TW74	.....	Tim	Day	Mar	Own
177	D5RT7-8	Cum HRB	.....	.....	.....	.....	.....	.....	.....	.....	.....	LR 15SP	Spi 1700	Ro TW74	.....	Tim	Day	Mar	Own
	WHITE-FREIGHTLINER																		
178	WF64, 64H, 42, 42L, 62P	Cum NHB600, NH8, NHH8	Cum	Vor	Lub	.....	Cum	Own	.....	DR	AL	Spi 14-2PI	Spi 1700	Gem 500	TS	Own	Bdd	Own	Par
	WILLYS-OVERLAND																		
179	CJ-3B Jeep	Own 4FB	.....	Oak	Fram	Car YF	AC	H-B	AL	AL	AW	Aub or Roc	Spi 1261	Ro T12	Own	Ben	K-H	Var	Mic
180	475-4WD	Own 4FB	.....	Oak	Fram	Car YF	AC	H-B	AL	AL	AW	Roc or Aub	Spi 1261	Ro TA13018	Own	Ben	K-H	Var	AOS
181	6226-4WD	Kaiser 6226	.....	Oak	Fram	Car WGO	Car	Her	AL	AL	AW	B&B	CS	Ro TA13018	Own	Ben	K-H	Var	AOS

Spark Plug Heat Range Chart

Proper spark plug heat range is important to engine operating efficiency. Too hot plugs may become coated with oxide to the point where performance is affected. Points wear rapidly, and early failure results. Too cold type plugs carbon up and become deposited with soot. Result is premature fouling and engine missing. The following charts show manufacturers' heat range numbers. However, only comparative heat range relationship is provided. Spark plugs of different manufacturers vary as to grouped ranges so that direct comparison is not always possible.

The heat range of a spark plug is mainly determined by the length of the insulators. Longer insulators run hotter since the heat must travel farther to reach the coolant. Shorter insulators run cooler because the heat travels a shorter distance as shown in the schematic drawings below. Heat range is identified by the number on the porcelain top.



Heat Range	Thread Size	AC		Champion	Auto-Lite		Blue Crown		Hastings
		Automotive	Commercial		Standard and Transport	Resistor	Xciter	Husky	
HOT	10 mm	M-8	.....	Y-8	P-6	PR-6	T-8X	T-8	10-170
		106, M-8	.....	Y-6	P-6	PR-6	T-6X	T-6	.....
		.....	104 Com	.....	.....	.....	T-4X	T-4	10-230
COLD		104, M-8	.....	Y-4*A	P-4	PR-4	T-2X	T-2	10-300
		.....	103 Com, 104 Com	.....	.....	.....	.....	.....	.....
HOT	14 mm	48, 48X	47 Com	J-14	A-11, AT-10	AR-10	M-13X	M-13	14-105
		48, 48X	47 Com	J-12, H-12**	A-11, AT-10	AR-10	M-11X	M-11	14-125
		46	46 Com	J-11	A-9, AT-8	AR-8	M-9X	M-9	.....
		45	45 Com	J-8	A-7, AT-8	AR-8, 4S-140	FM8LX**	FM8L**	.....
		45-L	45-L Com	H-11**	AL-7	ARL-8	M-7X	M-7	14-165
		45-L	45-L Com	H-10**	AL-7	ARL-8	M-7X	M-7	.....
		44	44 Com	J-7	A-5, AT-6	AR-5, 4S-165	FM6LX**	FM6L**	14-190
		43-L	43-L Com	H-9**	AL-5	ARL-5	M-5X	M-5	.....
		43-L	43-L Com	H-8**	AL-5	ARL-5	M-5X	M-5	14-225
		.....	43 Com	.....	A-3	AR-4, 4S-250	M-4X	M-4	.....
		.....	43 Com	J-6	AT-4	AR-4	M-3X	M-3	.....
COLD		43-M	42 Com	.....	.....	.....	.....	.....	.....
		.....	42 Com	J-2	.....	.....	M-2X	M-2	14-300
HOT	18 mm	.....	.....	.....	.....	.....	.....	H-189	18-105
		.....	.....	.....	.....	.....	.....	H-187	.....
		.....	88-L Com	10 Com-64†	B-11*, BT-10	BR-10	.....	.....	.....
		88	.....	C-15	B-11*, BT-10	BR-10	87SX	87-S	.....
		86	85 Com	C-7	B-9*, BT-8	BR-8	.....	.....	.....
		.....	86 Com, 86-S Com	8 Com	B-9*, BT-8	BR-8	86-SX	86-S	18-135
		.....	85-S Com	15-A	B-9*, BT-8	BR-8	85-SX	85-S	.....
		86	85 Com	7	B-7*, BT-6	BR-8	.....	.....	.....
		.....	83 Com, 83-S Com	6 Com	B-5*, BT-4	BR-4	84-SX	84-S	18-155
		82	82 Com, 82-S Com	H-17-A, 5 Com	B-3, BT-3	.....	83-SX	83-S	.....
		.....	81-S Com	H-16-A, 4 Com	B-3, BT-3	.....	82-SX	82-S	.....
		.....	.....	R-7	.....	.....	.....	R-86	18-220
		.....	.....	R-1	.....	.....	.....	R-80	.....
COLD		.....	.....	R-11	.....	.....	.....	R-80A	18-320
HOT	7/8"	.....	.....	.....	.....	.....	.....	H-179	7/16-106
		.....	78L-Com	3 Com†, 2 Com L	.....	.....	.....	H-177	.....
		.....	78S	C-4	T-11*, TT10	.....	.....	H-176	7/16-135
		78	.....	20	T-9*, TT8	.....	.....	.....	.....
		78	.....	.....	.....	.....	78X	78	.....
		74	75-Com	1 Com	T-7*, TT8	.....	76-X	76	.....
		.....	.....	.....	.....	.....	75-X	75	7/16-155
COLD		.....	73-Com	0 Com	T-5*, TT4	.....	74-X	74	.....
		.....	.....	.....	.....	.....	73-X	73	7/16-220
	1/2" Pipe	26	.....	30	.....	.....	.....	TF	.....
		26	.....	A-25	.....	.....	.....	.....	.....

* To be discontinued as soon as present stocks are depleted. Use equivalent Transport or Resistor type for replacement.
** 7/8 in. reach. † Long reach types.

POWER RATINGS of TRU

Showing maximum and net horsepower, maximum torque, weight and pisto

ENGINE MAKE AND MODEL	Number of Cylinders Bore and Stroke (In.)	MAX. BRAKE H.P. at R.P.M.		Piston Displacement (Cu. In.)	Compression Ratio	TORQUE	Engine Weight Without Carburetor or Ignition (Lb.)
		With Bare Engine	With Standard Accessories			Maximum Torque at R.P.M. (Lb. Ft.)	
GASOLINE							
AUTOCAR							
377	6-4x5	119-2800		377.0	6.00	288-1100 (BE)	1233
447	6-4¼x5¼	145-2700		447.0	6.00	353-1100 (BE)	1395
501	6-4½x5¼	165-2700		501.0	6.00	400-1100 (BE)	1440
BRENNAN							
75	6-3¼x4⅛	90-3500	75-3300	230.3	6.70	175-1000 (EA)	710
B-70	6-4x5½	90-2000	75-2000	415.0	4.50	278- 900 (EA)	800
B-100	6-4⅜x5½	94-2000	80-2000	496.0	4.50	350-1200 (EA)	875
BUDA							
LO-525	6-4½x5½	157-2400	139-2400	525.0	5.00	400-1200 (BE)	1195
6-MO-893	6-5⅛x6	199-2000	170-2000	893.0	5.50	670-1000 (BE)	2400
6-MO-970	6-5⅛x6½	200-1800	171-1800	970.0	5.43	720- 800 (BE)	2400
CHEVROLET							
Thriftmaster 235	6-3 7/16x3½	107-3600	102-3500	235.5	7.50	192-2000 (BE)	614
Loadmaster 235	6-3 7/16x3½	112-3700	105-3600	235.5	7.50	200-2000 (BE)	615
Jobmaster 261	6-3¼x3½	125-4000	114-3600	261.0	7.17	210-2000 (BE)	617
Jobmaster 261	6-3¼x3½	135-4000	123-3600	261.0	7.17	220-2000 (BE)	622
CONTINENTAL							
F-4124	4-3x4⅜	47-3200		124.0		94-1600 (BE)	395
F-4140	4-3 1/16x4⅜	52-3200		140.0		108-1600 (BE)	395
F-4162	4-3 1/16x4⅜	58-3200		162.0		122-1600 (BE)	395
F-6186	6-3x4⅜	77-3500		186.0	6.70	142-1600 (BE)	515
F-6209	6-3 1/16x4⅜	90-3500		209.0	6.70	160-1600 (BE)	515
F-6226	6-3 1/16x4⅜	99-3500		226.0	6.70	180-1600 (BE)	515
M-6271	6-3⅝x4⅜	97-3000		271.0	6.70	209-1400 (BE)	755
K-6271	6-3⅝x4⅜	115-3200		271.0	6.40	216-1400 (BE)	
M-6290	6-3⅝x4⅜	108-3000		290.0	6.70	226-1400 (BE)	755
K-6290	6-3⅝x4⅜	123-3200		290.0	6.40	232-1400 (BE)	
M-6330	6-4x4⅜	125-3000		330.0	6.70	258-1400 (BE)	755
K-6330	6-4x4⅜	145-3200		330.0	6.40	266-1800 (BE)	
B-6371	6-4 1/16x4⅜	123.5-3000		371.0	6.50	284-1400 (BE)	870
T-6371	6-4 1/16x4⅜	144-3000		371.0	6.40	297-1400 (BE)	1070
B-6427	6-4⅛x4⅞	142-3000		427.0	6.50	328-1200 (BE)	875
T-6427	6-4⅛x4⅞	169.8-3000		427.0	6.40	350-1400 (BE)	1075
U-6501	6-4½x5¼	178-2600		501.0	6.20	414-1200 (BE)	
R-6513	6-4½x5⅝	180-2800		513.0	6.00	410-1200 (BE)	1525
R-6572	6-4⅝x5⅝	200-2800		572.0	6.00	451-1300 (BE)	1525
R-6602	6-4⅞x5⅝	212-2800		602.0	6.00	480-1400 (BE)	1525
S-6749	6-5⅜x5½	250-2800		749.0		574-1400 (BE)	1865
S-6820	6-5⅝x5½	275-2800		820.0		628-1400 (BE)	
DODGE							
T-334, T-336	6-3¼x4⅜	100-	89-	217.8	7.10	177-1600 (BE)	475
T-137, T-164, T-165	6-3¼x4⅜	103-	91-	230.2	7.25	191-1200 (BE)	510
T-338, T-342, TS-342, T-362, T-364	6-3¼x4⅜	110-	100-	230.2	7.25	194-1600 (BE)	490
VTX-342, VT-344, VT-346, VTX-346	6-3 7/16x3¼	133-	119-	241.4	7.50	220-2000 (BE)	
T-356	6-3 7/16x4½	112-	101-	250.6	7.00	205-1600 (BE)	525
TX-342, T-344, TS-344	6-3 7/16x4½	120-	110-	250.6	7.00	210-1200 (BE)	525
T-358, TX-358	6-3 7/16x4 11/16	114-	104-	265.4	7.00	216-1200 (BE)	525
T-344, T-346, TS-346, TX-346	6-3 7/16x4 11/16	123-	112-	265.4	7.00	225-1200 (BE)	525
T-346, TX-346	6-3 7/16x4 11/16	136-	127-	265.4	7.00	226-1600 (BE)	525
VT-348, VTS-348	8-3 1/16x3⅝	153-	143-	331.1	7.00	268-1600 (BE)	715
VT-350, VTX-350	8-3 1/16x3⅝	172-	157-	331.1	7.00	294-4000 (BE)	715
T-352, T-353	6-4 7/16x5 5/16	171-	152-	413.2	6.50	343-1500 (BE)	1150
FAGEOL							
FTC-180	6-4½x4¼	180-2800		404.0	7.50	360-1600 (BE)	952
FTC-200	6-4⅝x5	200-2800		451.0	7.29	400-1600 (BE)	952
FTC-210	6-4⅝x5	210-2800		477.0	7.09	480-1600 (BE)	952
FORD							
ERR, EBS, EBT	6-3.62x3.6	115-3900	102-3400	223.0	7.20	193-1600 (BE)	
ERV, EBW	8-3 1/16x3.1	130-4200	112-3600	239.0	7.20	214-2000 (BE)	
EBZ	8-3.62x3.1	138-3900	120-3600	256.0	7.20	266-1700 (BE)	
EAL	8-3 7/16x3½	152-3800	134-3600	279.0	7.20	248-2100 (BE)	
EAM	8-3.8x3½	170-3900	151-3600	317.5	7.20	286-2000 (BE)	
G. M. C.							
248	6-3 7/16x3 13/16	125-3600	115-3400	248.5	7.50	210-1200 (BE)	
270	6-3⅞x4	125-3400	105-3200	269.5	7.50	232-1000 (BE)	
270	6-3⅞x4	130-3400	118-3400	269.5	7.50	232-1000 (BE)	
302	6-4x4	145-3600	131-3400	301.6	7.20	262-1200 (BE)	
360	6-4 1/16x4½	155-3200	140-3000	360.8	6.50	297-1000 (BE)	
426	6-4½x5	177-3200	154-2800	425.6	6.50	342-1200 (BE)	
503	6-4 7/16x5 1/16	200-3000	181-2800	502.7	6.50	422-1200 (BE)	
HALL-SCOTT							
*†1136	6-4 1/16x5	157-2600	136-2600	477.1	6.00	375-1700 (BE)	1279*
†504	6-4⅝x5	180-2500	162-2500	504.0	6.00	425-1600 (BE)	1279*
590	6-5x5	220-2800	205-2800	590.0	7.00	510-1800 (BE)	1130*
*†190-1-3-5	6-5x6	208-2200	188-2100	707.0	6.00	540-1500 (BE)	1700*
*†190-2-3-5	6-5 1/16x6	220-2200	200-2200	779.0	5.60	625-1300 (BE)	1700*
†190-1	6-5 1/16x6	235-2200	215-2200	779.0	6.00	640-1400 (BE)	1870*
*855	6-5 1/16x6	260-2400	244-2400	855.0	6.00	680-1200 (BE)	2150*
470	6-5 1/16x6	244-2200	216-2200	855.3	5.25	660-1600 (BE)	2150*
*480	6-5⅝x6	274-2200	240-2200	934.8	5.70	800-1200 (BE)	2150*
*835	6-5⅝x6	295-2400	270-2400	935.0	6.40	800-1400 (BE)	2150*
*490	6-5⅝x7	298-2000	252-2000	1090.0	5.70	930-1300 (BE)	2150*
*1091	6-5⅝x7	332-2200	308-2200	1090.0	6.40	960-1200 (BE)	2150*
HERCULES							
ZXA	4-2½x3	22.5-4000	19-4000	59.0	6.30	36-2200 (BE)	179
ZXB	4-2⅝x3	25-4000	21-4000	65.0	6.30	40-2200 (BE)	179
IXA	4-3x4	40-3200	34-3200	113.0	6.50	78-1800 (BE)	285
IXB	4-3 1/16x4	46-3200	39-3200	133.0	6.50	92-1800 (BE)	293
IXLB	4-3 1/16x4 1/16	49-3200	42-3200	141.0	6.50	97-1800 (BE)	293
JX4E	4-3 1/16x4 1/16	52-2900	44-2900	164.0	6.70	121-1400 (BE)	470
JX4C	4-3⅜x4 1/16	60-2900	51-2900	188.0	6.70	139-1400 (BE)	470
OXA	6-3 1/16x4 1/16	64-3200	54.5-3200	190.0	6.50	132-1300 (BE)	440
OXB	6-3 1/16x4 1/16	69-3200	59-3200	205.0	6.50	142-1400 (BE)	440
JX4D	4-4x4 1/16	68-2900	57-2900	214.0	6.70	157-1400 (BE)	470
OXC	6-3⅜x4 1/16	77.5-3200	66-3200	221.0	6.50	159-1400 (BE)	440
OXD	6-3 7/16x4 1/16	78.4-3200	70-3200	230.0	6.50	167-1500 (BE)	440
OXLD	6-3 7/16x4 1/16	92-3200	77-3200	236.7	6.50	190-1400 (BE)	440
JXE	6-3 1/16x4 1/16	91-3200	77-3200	245.0	6.50	184-1400 (BE)	666
JX6	6-3⅝x4 1/16	98-3200	83-3200	263.0	6.50	190-1400 (BE)	666
JXC	6-3⅜x4 1/16	103-3200	87.5-3200	262.0	6.50	207-1400 (BE)	666
JXD	6-4x4 1/16	113-3000	96-3000	320.0	6.50	240-1200 (BE)	666
JXLD	6-4x4 1/16	131-3200	111-3200	339.0	6.50	272-1400 (BE)	630
WXLC	6-4x4⅝	123-2600	104-2600	358.0	6.50	275-1300 (BE)	611
WXC-3	6-4 1/16x4 1/16	131-2600	111-2600	383.0	6.50	296-1400 (BE)	623
WXLC-3	6-4 1/16x4⅝	139-2600	118-2600	404.0	6.50	312-1300 (BE)	623
TDXB	6-4⅝x5 1/16	161-2600	137-2600	474.0	6.50	366-1300 (BE)	1229
RXB	6-4 1/16x5 1/16	137-2400	116-2400	501.0	6.30	350-1200 (BE)	1000
TDXC	6-4 1/16x5 1/16	170-2600	146-2600	501.0	6.50	388-1300 (BE)	1229
RXC	6-4⅝x5 1/16	143-2400	121-2400	529.0	6.30	372-1100 (BE)	1010
RXLC	6-4⅝x5 1/16	146-2400	124-2400	529.0	6.30	408-1100 (BE)	1165
RXLD	6-4⅝x5 1/16	154-2400	131-2400	558.0	6.30	430-1100 (BE)	1165
RXLDH	6-4⅝x5 1/16	181-2600	153-2600	558.0	6.50	443-1400 (BE)	1329
HXB	6-5x6	160-2000	135-2000	707.0	6.20	502- 900 (BE)	1810
HXC	6-5 1/16x6	175-2000	149-2000	779.0	6.20	555- 900 (BE)	1810
HXD	6-5 1/16x6	202-2000	172-2000	855.0	6.20	645- 900 (BE)	1830
HXE	6-5⅝x6	227-2000	193-2000	935.0	6.20	750- 900 (BE)	1830
LE ROI							
TH540	8-4½x4 1/16	208-3000		540.0	6.70	450-1800 (EA)	1385
H844	8-5¼x4 7/16	300-2800	260-2700	844.0	6.50	710-1800 (BE)	

ABBREVIATIONS

*—A model in this series is also available for use with liquid petroleum gases. The engine will have a higher compression ratio, brake horsepower and torque.

†—Horizontal motor.

ENGINE MAKE AND MODEL
MACK
EN291
EN331
EN401
EN431A
EN464
EN707A
REO
OA-255-LPG
OA-255
OA-292
OA-331
OA-331-LPG
OH-160
WAUKESHA
FC
180GL
XAH
185GL
190GL
DIESELS
BUDA
6BD-230
6DA-273
6DT-317
6DT-466
6DAS-516
6DA-779
6DA-844
6DAS-844
8DA-1125
8DAS-1125
CONTINENTAL
TD-6427
RD-6572
SD-6802
CUMMINS
A-600
JBS-600
HR-400
H-600
‡HS-600
HR-600
HRBB-600
†NHH-600
NH-600
‡HRS-600
†NHHS-600
‡NHS-600
†NHRS-600
NVH-1200
†NVHS-1200
FAGEOL-LEYLAND
400
680
GENERAL MOTORS
3-71
4-61
4-71
6-71
HERCULES
DIX4B
DIX4D

*—Includes ignition buretor.

# of TRUCK and BUS ENGINES

and piston displacement for both gasoline and diesel types

ENGINE MAKE AND MODEL	Number of Cylinders Bore and Stroke (In.)	MAX. BRAKE H.P. at R.P.M.		Piston Displacement (Cu. In.)	Compression Ratio	TORQUE	Engine Weight Without Carburetor or Ignition (Lb.)
		With Bare Engine	With Standard Accessories			Maximum Torque at R.P.M. (Lb. Ft.)	
MACK							
EN291	6-3⅝x4⅝	107-2800	100-2800	290.0	6.90	225-1400 (EA)	910
EN331	6-4x4⅝	122-2800	114-2800	330.0	6.90	256-1400 (EA)	920
EN401	6-4⅛x5½	152-3000	150-2800	401.0	7.29	330-1400 (BE)	1012
EN431A	6-4⅛x5⅝	142-2500	123-2500	431.0	6.32	302-1200 (EA)	1525
EN464	6-4⅛x5	.....	170-2800	464.0	6.71	370-1000 (BE)	1560
EN707A	6-5x6	196-2000	179-2000	707.0	6.10	544-11000 (EA)	1803
REO							
OA-255-LPG	6-3⅝x4⅛	100-3400	86-3400	255.0	7.15	182-1600 (BE)	872*
OA-255	6-3⅝x4⅛	107-3400	93-3400	255.0	6.70	183-1200 (EA)	820
OA-292	6-3⅞x4⅛	124-3300	110.5-3300	292.0	6.55	218-1400 (EA)	830
OA-331	6-4⅛x4⅛	140-3200	126-3200	331.0	6.40	260-1200 (EA)	872
OA-331-LPG	6-4⅛x4⅛	142-3200	130-3200	331.0	8.20	258-1800 (BE)	914
OH-160	6-4⅛x4⅛	160-3200	148.5-3200	331.0	6.73	290-1400 (BE)	963*
WAUKESHA							
FC	4-3½x4	35-2400	30-2200	133.0	5.58	96-1200 (BE)	290
180GL	4-3½x3¾	45-2400	37-2000	144.0	6.75	118-1600 (BE)	450
XAH	4-3⅝x4½	47-2000	44-2000	186.0	5.50	131-1400 (BE)	385
185GL	6-3½x3¾	67-2400	59-2200	216.0	6.75	176-1400 (BE)	740
190GL	6-3¾x4	77-2200	68-2000	265.0	6.50	223-1200 (BE)	690
DIESELS							
BUDA							
6BD-230	6-3⅛x4½	60-2400	40-1800	230.0	15.30	156-1400	860
6DA-273	6-3¾x4½	85-2800	53-1800	273.0	14.20	204-1400	830
6DT-317	6-3⅝x5½	90-2300	56-1800	317.0	14.50	224-1500	1133
6DT-468	6-4½x5½	113-2000	75-1600	468.0	14.20	268.5-1100	1435
6DAS-516	6-4⅞x5⅞	165-2400	110-1800	516.0	13.40	404-1600	1900
6DA-779	6-5¼x6	185-2100	143-1800	779.0	14.20	540-1400	.....
6DA-844	6-5¼x6½	215-2100	166-1800	844.0	14.20	640-1500	2850
6DAS-844	6-5¼x6½	280-2100	180-1600	844.0	12.80	780-1500	.....
8DA-1125	8-5¼x6½	288-2100	187-1600	1125.0	14.20	830-1300	.....
8DAS-1125	8-5¼x6½	350-2100	220-1600	1125.0	12.80	1040-1400	.....
CONTINENTAL							
TD-6427	6-4⅛x4⅞	116-2400	.....	427.0	14.50	307-1300	1270
RD-6572	6-4¾x5⅝	162-2400	.....	572.0	14.50	423-1300	1785
SD-6802	6-5⅞x5½	217-2200	.....	802.0	14.70	.....	.....
CUMMINS							
A-600	6-4x5	100-2200	57-1600	377.0	18.00	275-1200	1640
JBS-600	6-4⅛x5	150-2500	123-2200	401.0	15.00	360-1400	1745
HR-400	4-5½x6	110-1800	71-1600	495.0	15.50	360-1050	1840
H-800	6-4⅞x6	150-1800	102-1800	672.0	17.00	500- 800	2595
‡HS-600	6-4⅞x6	200-1800	140-1800	672.0	14.00	625-1400	2780
HR-600	6-5½x6	165-1800	115-1800	743.0	15.50	540-1000	2600
HRBB-600	6-5½x6	180-2000	113-1800	743.0	15.50	505-1100	2650
†NHH-600	6-5½x6	200-2100	130-1800	743.0	15.50	535-1300	.....
NH-600	6-5½x6	200-2100	130-1800	743.0	15.50	535-1400	2680
‡HRS-600	6-5½x6	225-1800	157-1800	743.0	13.50	695-1000	2780
†NHHS-600	6-5½x6	275-2100	175-1800	743.0	13.50	710-1600	2775
‡NHS-600	6-5½x6	275-2100	175-1800	743.0	13.50	710-1600	2975
†NHRS-600	6-5½x6	300-2100	188-1800	743.0	12.00	800-1400	2925
NVH-1200	12-5½x6	400-2100	262-1800	1486.0	15.50	1075-1200	5500
†NVHS-1200	12-5½x6	550-2100	350-1800	1486.0	13.50	1420-1600	5000
FAGEOL-LEYLAND							
600	6-4⅛x5½	160-2400	.....	597.0	15.75	455-1200	1625
690	6-5x5¾	185-2400	.....	677.0	15.75	504-1100	1625
GENERAL MOTORS							
3-71	3-4¼x5	.....	.....	213.0	16.00	268-1600	.....
4-51	4-4.1x4.1	.....	.....	217.0	18.00	186-2000	.....
4-71	4-4¼x5	.....	.....	284.0	16.00	404-1600	.....
6-71	6-4¼x5	.....	.....	426.0	16.00	619-1600	.....
HERCULES							
DIX4B	4-3¼x4	46-3000	33-2200	133.0	15.50	96-1500	600
DIX4D	4-3⅝x4	57-3000	41-2200	165.0	15.50	120-1500	600

ENGINE MAKE AND MODEL	Number of Cylinders Bore and Stroke (In.)	MAX. BRAKE H.P. at R.P.M.		Piston Displacement (Cu. In.)	Compression Ratio	TORQUE	Engine Weight Without Carburetor or Ignition (Lb.)
		With Bare Engine	With Standard Accessories			Maximum Torque at R.P.M. (Lb. Ft.)	
WAUKESHA—Cont.							
195GL	6-4x4	85-2400	77-2200	302.0	6.20	240-1200 (BE)	775
195GKA	6-4⅛x4	122-3000	88-2200	320.0	6.20	243-1600 (BE)	775
6MZA	6-4¼x4¾	128-2800	82-2000	404.0	5.60	289-1000 (BE)	920
135GKB	6-4¼x5	147-2800	121-2200	426.0	6.25	337-1200 (BE)	1325
135GZB	6-4⅝x5	153-2800	130-2200	451.0	6.30	354-1200 (BE)	1495
140GK	6-4⅛x5½	160-2250	117-1800	525.0	6.40	401-1000 (BE)	1390
140GKB	6-4⅛x5½	177-2600	135-2000	525.0	6.40	425-1000 (BE)	1495
140GZ	6-4⅝x5½	188-2250	135-1800	554.0	6.40	448-1100 (BE)	1398
140GZB	6-4⅝x5½	188-2600	143-2000	554.0	6.40	448-1100 (BE)	1390
145GK	6-5¼x6	216-2000	167-1800	779.0	6.20	595-1000 (BE)	1810
145GKB	6-5¼x6	240-2400	178-2000	779.0	6.20	595-1000 (BE)	1810
145GZB	6-5½x6	250-2400	185-2000	817.0	6.00	630-1100 (BE)	1810
6WAK	6-6¼x6½	222-1600	206-1500	1197.0	5.20	892- 900 (BE)	3050
6WAKB	6-6¼x6½	280-1800	255-1800	1197.0	5.20	1000-1000 (BE)	3050
WILLYS							
CJ-3A	4-3⅛x4⅜	63-4000	.....	134.2	6.48	105-2000 (BE)	344
475	4-3⅛x4⅜	72-4000	.....	134.2	7.40	114-2000 (BE)	390
685	6-3⅛x3½	90-4200	.....	161.0	7.60	135-1600 (BE)	390
6-226	6-3⅞x4⅜	118-3650	.....	226.2	7.30	200-1800 (BE)	550*
HERCULES—Cont.							
DOOB	4-3⅝x4½	62-2600	41-1800	199.0	15.50	142-1400	750
DOOC	4-4x4½	70-2600	47-1800	226.0	15.50	162-1400	750
DIX6D	6-3⅝x4	93-3000	67-2200	249.0	15.50	186-1800	800
DOOD	4-4⅛x4½	79-2600	53-1800	255.0	15.50	182-1400	750
DJXB	6-3⅞x4½	77-2600	51-1800	260.0	15.50	179-1300	950
DIX6-272	6-3½x4	102.5-3000	72-2200	272.0	15.50	204-1800	800
DJXC	6-3⅝x4½	83-2600	59-1800	298.0	15.50	206-1300	950
DJXH, DJXHF	6-3⅝x4½	99-2600	67-1800	298.0	15.50	234-1400	950
DWXC	6-4x4¾	120-2600	80-1800	358.0	15.50	284-1600	1350
DWXD	6-4⅛x4¾	135-2600	91-1800	404.0	15.50	320-1600	1350
DWXIDF	6-4⅛x5	142-2600	90-1800	426.0	15.50	319-1400	1325
DWXID	6-4⅛x5	142-2600	95-1800	426.0	15.50	333-1600	1350
DRXB	6-4⅝x5¼	134-2200	90-1600	474.0	15.00	358-1200	1600
DRX-501	6-4⅛x5¼	139-2200	96-1600	501.0	15.00	388-1500	1600
DRXC	6-4⅝x5¼	147-2200	100-1600	529.0	15.00	395-1200	1600
DFXB	6-5x6	190-2100	133-1600	707.0	14.80	530-1350	2500
DFXC	6-5¼x6	204-2100	149-1600	779.0	14.80	585-1350	2500
DFXD	6-5¼x6	217-2100	162-1600	855.0	14.80	645-1200	2500
DFXE	6-5⅝x6	228-2100	170-1600	895.0	14.80	680-1200	2500
DFXETS	6-5⅝x6	318-2000	218-1600	895.0	14.80	846-1800	3000
DFXH, DFXHF	6-5⅝x6	260-2100	187-1600	935.0	14.80	750-1200	2600
DNXV8D	8-6¼x6	388-1800	280-1600	1468.0	14.80	1100-1200	4200
MACK							
END-510	6-4⅛x5½	138-2400	.....	510.0	14.92	368-1400	1727
END-673	6-4⅞x6	170-2100	.....	672.0	16.59	480-1200	1984
ENDS-672	6-4⅞x6	222-2000	.....	672.0	13.18	640-1400	2204
P. & H.							
287C	2-4½x5½	54-1400	40-1200	174.0	16.00	210- 800	1030
387C	3-4½x5½	83-1400	60-1200	261.0	16.00	315- 800	1300
487C	4-4½x5½	110-1400	80-1200	348.0	16.00	440- 800	1550
687C	6-4½x5½	165-1400	120-1200	522.0	16.00	630- 800	1900
SHEPPARD							
12D, E, F	6-4¼x5	100-2000	67-1800	426.0	22.00	326-1200	1790
WAUKESHA							
180-DLC	4-3½x3¾	45-2400	26-2000	144.0	17.00	102-1800	475
185-DLC	6-3½x3¾	60-2400	44-2000	216.0	17.00	152-1000	800
190-DLCA	6-3¾x4	84-2800	46-2000	265.0	17.00	191-1400	868
195-DLCA	6-4x4	98-2800	62-2000	302.0	17.00	221-1800	985
135-DKB	6-4¼x5	147-2800	85-1800	426.0	17.50	328-1800	1386
135-DKBS	6-4¼x5	185-2800	.....	426.0	17.50	400-1800	1486
148-DKB	6-5¼x6	200-2150	147-1800	779.0	17.50	584-1000	2320
148-DKBS	6-5¼x6	280-2100	.....	779.0	17.50	706-1800	2445
WAKD	6-6¼x6½	224-1600	167-1600	1197.0	16.50	840-1000	3800
WAKDS	6-6¼x6½	352-1800	244-1600	1197.0	16.50	1062-1600	3925

*—Includes ignition system and carburetor.

•—Includes ignition system, carburetor and SAE housing.

■—Includes clutch and housing.
‡—Supercharged engine.

BE—With bare engine.
EA—Engine with standard accessories.

PASSENGER CARS

Chevrolet

Dodge (6 and 8 Cyl Models)

Ford (6 and 8 Cyl Models)

Plymouth

Pontiac (6 Cyl Models)

Studebaker (6 Cyl Models)

• PASSENGER CARS

BATTERY — FRONT END — CAPACITIES

MODEL No. — STANDARD ENGINE	Amp. Hr. Capacity	Number of Plates	Terminal Grounded	SAE Group No.	AABM Group No.	Toe-in (In.)	Camber (Deg.)	Caster (Deg.)	King Pin Slant (Deg.)	Lubricant: Engine (Quarts)	Lubricant: Transmission (Pints)	Lubricant: Rear Axle (Pints)	Cooling System (Quarts)
CHEVROLET (Std. Trans. Chassis) ..... Own	100	15	Neg	1M	.....	1/16–1/8	0–1P	0–1P	3½–4½	5	1½	3½	16a
DODGE (6 Cyl.) ..... Own	105	15	Pos	1H	.....	0–1/16	‡N–‡P†	1N–1P	5–6½	5	2¾	3¼	19a
DODGE (8 Cyl.) ..... Own	105	15	Pos	1H	.....	0–1/16	‡N–‡P†	1N–1P	5–6½	5	2¾	3¼	14a
FORD (6 Cyl.) ..... Own	90	15	Pos	.....	.....	1/16–1/8	0–1P†	0–1P*	7½ed	5	3	3½	20a
FORD (8 Cyl.) ..... Own	90	15	Pos	.....	.....	1/16–1/8	0–1P†	0–1P*	7½ed	5	3	3½	20a
PLYMOUTH ..... Own	100	15	Pos	1M	.....	0–1/16	‡N–‡P^	1N–1P	5–6½	5	2¾	3¼	14a
PONTIAC (6 Cyl.) ..... Own	100	15	Neg	2E	.....	0–1/16	0–1P	½N–½P	NS	5	1¾	3¼	18.3b
STUDEBAKER (6 Cyl.) ..... Own	.....	15	Pos	.....	.....	1/16–1/8	0–1P■	1N‡2½N	6	5	1½	2½	10c

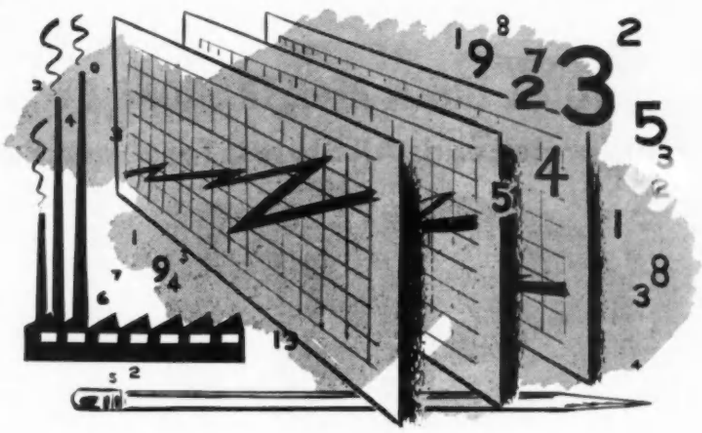
LUBRICATION

MODEL No. — STANDARD ENGINE	Engine: Viscosity and Temperature Range			Transmission: Summer	Transmission: Winter	Rear Axle: Summer	Rear Axle: Winter	Steering Gear: Summer	Steering Gear: Winter	Universal Joints
CHEVROLET (Std. Trans. Chassis) ..... Own	20 or 20W above 32°	20W above 10°	10W above −10°	90n	90n	90p	90p	w	w	t
DODGE (6 Cyl.) ..... Own	30 above 32°	20W above 10°	10W above −10°	10W	10Wi	90qi	90q	90	90	z
DODGE (8 Cyl.) ..... Own	30 above 32°	20W above 10°	10W above −10°	10Wi	10Wi	90q	90q	90	90	z
FORD (6 Cyl.) ..... Own	20W above 32°	10 or 10W @ −10° to 32°	.....	80k	80k	90r	90r	90o	.....	u
FORD (8 Cyl.) ..... Own	20W above 32°	10 or 10W @ −10° to 32°	.....	80k	80k	90r	90r	90o	.....	u
PLYMOUTH ..... Own	30 above 32°	20W @ −10° to 32°	10W@−10° to 10°	10Wi	10Wi	90q	90q	90	90	u
PONTIAC (6 Cyl.) ..... Own	20W above 32°	10W below 32°	.....	80–90j	80–90j	90q	90q	x	x	u v
STUDEBAKER (6 Cyl.) ..... Own	30 above 30°	20 @ 10° to 30°	10W@−10° to 10°	90m	90m	90s	90s	y	y	v

TUNE UP — VALVE SPRINGS — TENSIONS

MODEL No. — STANDARD ENGINE	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Intake Valve Opens B-Before A-After: Flywheel Teeth °TC	Intake Tappet Clearance for Valve Timing	Operating Tappet Clearance (Hot unless noted): Intake	Operating Tappet Clearance (Hot unless noted): Exhaust	Spark Plug: Make	Spark Plug: Type	Spark Plug: Size	Spark Plug: Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Compression Pressure at Cranking Speed	Valve Springs — Valve Open: Average Pressure (Lb.)	Valve Springs — Valve Open: Length (In.)	Valve Springs — Valve Closed: Average Pressure (Lb.)	Valve Springs — Valve Closed: Length (In.)	Tensions: Cylinder Head (Lb.-Ft.)	Tensions: Main Bearings (Lb.-Ft.)	Tensions: Connecting Rod Bearings (Lb.-Ft.)
CHEVROLET (Std. Trans. Chassis) ..... Own	6–3 7/16x3 1/4	45–1185	1A	.....	.....	.010	.020	AC	44-5	14mm	.036	.015	2A	.....	.....	160	1.505	65.0	1.821	75–80	100–110	40–50
DODGE (6 Cyl.) ..... Own	6–3 1/4x4 5/8	48–1500 ▸	17B	.....	VTS ◂	0	0	AL	4S-140	14mm	.035	.017	4B	.....	.....	O. 105 / I. 42.5	1.312 / 1.188	40.5 / 21.5	1.688 / 1.562	.....	.....	.....
DODGE (8 Cyl.) ..... Own	6–3 1/4x4 5/8	45–1225	12B	.....	.014	.010	.010	AL	4S-140	14mm	.035	.020	2B	.....	.....	115	1.375	42.5	1.750	.....	.....	.....
FORD (6 Cyl.) ..... Own	6–3.6x3.6	50–35	13B	.....	.013	.015	.019	CH	H-10	14mm	.035	.025	3B	.....	.....	132	1.505	58	1.821	65–75	95–105	.....
FORD (8 Cyl.) ..... Own	8–3.5x3.1	50–35	8B	.....	.015	.019	.019	CH	H-10	14mm	.035	.015	6B	.....	.....	132	1.505	58	1.821	65–75	80–90	.....
PLYMOUTH ..... Own	6–3 1/4x4 5/8	45–1225	12B	.....	.014	.010	.010	AL	4S-140	14mm	.035	.020	2B	.....	.....	115	1.375	42.5	1.750	65–70	80–85	45–50
PONTIAC (6 Cyl.) ..... Own	6–3 7/16x4	39–40	12½B	.....	.015e	.012	.012	AC	44-5	14mm	.026	.016	3B	.....	.....	101	1.594	59.5	1.906	50–60	85–95	35–45
STUDEBAKER (6 Cyl.) ..... Own	6–3x4	40–1500	15B	.....	.020	.016e	.016e	CH	J-7	14mm	.031	.020	2B	.....	.....	98	1.313	51.5	1.656	60–65	65–70	50–55

P—Positive. N—Negative. VTS—Valve train solid. NS—Not specified. †—Not to vary more than ½° from one side to the other. ^—Left side to be ¼° to ½° greater than right side within these limits. *—Left side to be ½–5° greater than right side. ■—Not to vary more than ½° from one side to the other. ‡—Not to vary more than ¾° from one side to the other. a—With heater, 1 qt. extra. b—With heater, 1.8 qt. extra. c—With heater 1.5 qt. extra. d—At ½ to 1½. e—Cold. f—Engine oil. j—Extreme pressure gear lubricant. k—Mild extreme pressure gear lube. m—Mineral oil. n—Multi-purpose gear lube or mineral oil. o—Mild extreme pressure lube. p—Hypoid or multi-purpose gear lube. q—Extreme pressure hypoid gear lube. r—Hypoid or multi-purpose extreme pressure gear lube. s—Hypoid gear lube. t—Lubricated from transmission. u—Use chassis gun grease on fittings. v—Chassis lube. w—Multi purpose gear oil. x—All season steering gear lube. y—Manufacturers' recommendation. z—Heavy fibre universal joint grease.



SECTION 2

INDUSTRY STATISTICS

Truck Data

Total Truck Registrations..... 116
New Truck Registrations.....116, 117, 118, 119
Truck and Bus Production..... 117
Trucks in Use.....118, 119
Truck Factory Sales..... 120
Factory Sales, Special Types of Vehicles..... 121

Trailer Data

Trailer Registrations 121
Trailer Factory Shipments..... 121

Bus Data

Bus Factory Sales, By Types..... 120
Bus Factory Sales, By Months..... 120
Transit Buses Delivered..... 120

Operating Data

Intercity Passenger Miles Traveled... 120
Urban Transit Riders..... 120
Indexes of Intercity Truck Tonnage..... 122
Comparative Intercity Truck Tonnage..... 122
U. S. Government Fleet Operating Facts..... 122

1954 COMMERCIAL CAR JOURNAL'S FLEET OPERATORS' REFERENCE ANNUAL

P—Positive. N—Negative. VTS—Valve train solid. NS—Not specified. †—Not to very more than ¼° from one side to the other. ▲—Left side to be ¼° to ½° greater than right side within these limits. ■—Left side to be ½° greater than right side. ●—Not to very more than ½° from one side to the other. ‡—Not to very more than ¾° from one side to the other. a—With heater, 1 qt. extra. b—With heater, 1.5 qt. extra. c—With heater 1.5 qt. extra. d—At ¼° to 1½. e—Cold. l—Engine oil. j—Extreme pressure gear lubricant. k—Mild extreme pressure gear lube. m—Mineral oil. n—Multi-purpose gear lube or mineral oil. o—Mild extreme pressure lube. p—Hypoid multi-purpose extreme pressure gear lube. q—Hypoid gear lube. r—Hypoid gear lube. s—Hypoid extreme pressure gear lube. t—Lubricated from transmission. u—Use chassis gun grease on fittings. v—Chassis lube. w—Multi purpose gear oil. x—All season steering gear lube. y—Manufacturers' recommendation. z—Heavy fibre universal joint grease.

TOTAL U. S. TRUCK REGISTRATIONS

Show 3.9% Gain in '53

Year	Units	% Gain
1915	136,000	59
1916	215,000	58
1917	326,000	52
1918	525,000	61
1919	794,372	51
1920	1,006,082	27
1921	1,117,100	11
1922	1,375,725	23
1923	1,612,569	17
1924	2,134,724	32
1925	2,440,854	14
1926	2,764,222	13
1927	2,914,019	5
1928	3,113,999	7
1929	3,379,854	8
1930	3,486,019	3
1931	3,466,571	−0.6
1932	3,229,315	−0.7
1933	3,227,357	−0.6
1934	3,409,335	5.5
1935	3,655,705	7.1
1936	3,981,755	9.1
1937	4,107,244	3.1
1938	4,210,022	2.5
1939	4,419,893	5.0
1940	4,604,722	4.2
1941	4,859,662	5.5
1942	4,644,209	−4.4
1943	4,549,882	−2.0
1944	4,516,157	−0.7
1945	4,908,778	8.8
1946	5,749,643	17.1
1947	6,612,922	15.0
1948	7,356,553	11.2
1949	7,615,431	3.5
1950	8,185,948	7.5
1951	8,696,224	8.2
1952	8,988,560	3.4
1953	9,343,590	3.9

NEW TRUCK REGISTRATIONS

930,312 New Trucks Sold in '53

Year	Units
1927	327,965
1928	341,123
1929	527,057
1930	410,699
1931	313,884
1932	180,413
1933	245,869
1934	402,886
1935	510,683
1936	611,644
1937	618,249
1938	365,349
1939	486,748
1940	559,150
1941	640,697
1942	77,422
1943	62,469
1944	121,269
1945	350,932
1946	625,249
1947	879,132
1948	1,035,174
1949	961,961
1950	1,142,307
1951	1,003,850
1952	812,099
1953	930,312

Source: 1926 through March, 1942, and 1946 and later years compiled by R. L. Polk & Co. April, 1942 through July, 1945 data are W.P.B. and O.D.T. and represent certificates of transfer to civilian users.

TOTAL TRUCK REGISTRATIONS BY STATES

California Leads All States; Texas and Penna. Next

	1953	1952	1951	1950	1949	1948
Alabama	170,753	164,490	152,058	151,700	138,062	127,066
Arizona	78,273	72,058	64,584	58,737	52,978	48,647
Arkansas	167,627	160,163	153,149	140,388	121,413	125,161
California	766,060†	700,129†	643,928	473,897	415,958	529,492
Colorado	145,293	138,333	128,325	131,299	124,709	115,006
Connecticut	97,700	93,754	89,172	87,174	77,716	75,691
Delaware	23,919	21,541	20,993	20,909	17,682	17,567
District of Columbia	20,000	20,073	18,602	18,372	18,389	18,389
Florida	205,668	194,223	187,219	175,240	165,307	156,639
Georgia	215,341	213,746	203,825	192,845	178,479	167,525
Idaho	65,953	69,313	75,484	71,405	64,137	59,644
Illinois	380,000	379,604	378,868	321,738	336,174	315,988
Indiana	267,196	253,362	247,965	244,258	206,154	227,480
Iowa	199,559	192,904	190,107	181,748	168,303	150,973
Kansas	231,590	224,348	215,097	203,722	195,449	183,733
Kentucky	188,000	181,705	171,445	167,342	154,941	137,711
Louisiana	178,469	166,205	161,426	151,749	140,001	122,935
Maine	65,500	64,437	63,353	64,195	59,894	62,210
Maryland	112,300	111,727	106,873	95,888	92,200	90,935
Massachusetts	168,505	169,766	169,543	165,850	153,208	151,609
Michigan	340,618	315,738	311,948	294,825	270,309	258,689
Minnesota	215,430	205,601	202,536	188,990	182,532	163,756
Mississippi	171,792	163,332	154,323	139,442	123,954	117,537
Missouri	276,000	274,433	270,150	261,607	245,458	227,205
Montana	92,438	87,117	84,252	78,210	76,476	70,391
Nebraska	145,000	142,901	138,431	123,933	119,473	105,780
Nevada	23,486	20,894	18,753	16,023	14,611	13,417
New Hampshire	32,700	33,002	33,511	39,347	36,214	31,623
New Jersey	220,006	215,188	213,853	208,798	199,920	199,260
New Mexico	76,700	69,343	59,349	60,123	52,564	45,696
New York	480,500	474,988	458,661	471,872	493,868	498,125
North Carolina	241,488	227,769	209,465	201,881	177,742	167,824
North Dakota	91,654	89,071	86,480	81,967	77,804	68,919
Ohio	376,000	360,000	352,441	327,359	304,801	296,296
Oklahoma	231,118	219,754	211,365	201,160	183,435	162,941
Oregon	89,539	86,682	83,841	130,979	123,897	115,648
Pennsylvania	517,500	507,881	502,255	508,927	452,867	416,551
Rhode Island	34,210	32,493	32,056	30,828	30,181	29,662
South Carolina	135,061	121,016	116,983	109,367	100,633	91,849
South Dakota	79,766	77,404	75,090	70,888	66,656	60,183
Tennessee	215,000	207,207	182,753	163,946	153,177	139,029
Texas	679,972	661,925	659,999	613,485	549,520	526,000
Utah	52,676	50,287	48,807	46,117	42,308	39,637
Vermont	15,040	15,208	14,941	14,911	15,023	15,355
Virginia	191,520	184,779	178,437	165,429	153,616	150,633
Washington	178,469	169,052	163,772	155,708	152,980	145,787
West Virginia	114,000	112,754	110,160	101,361	96,831	86,217
Wisconsin	231,404	226,175	228,277	221,368	210,069	196,503
Wyoming	46,707	44,685	41,319	38,641	35,358	31,709
Total	9,343,590	8,988,560	8,696,224	8,185,948	7,615,431	7,356,553

†—Includes light commercial vehicles registered as passenger cars.

NEW TRUCK REGISTRATIONS BY MAKES, BY YEARS*

Chevrolet Leads, But Ford Shows Biggest Unit Gain

	1953	1952	1951	1950	1949	1948	1947
Autocar	1,713	1,595	2,112	2,072	1,655	2,770	4,334
Brockway	2,080	1,752	2,182	2,384	1,626	2,958	4,255
Chevrolet	327,960	272,249	350,344	414,496	345,519	302,219	235,803
Crosley	†	†	†	422	871	2,411	.....
Diamond T	3,398	3,420	4,508	5,675	5,172	10,657	10,475
Divco	2,569	2,752	3,752	4,309	3,577	5,618	4,893
Dodge	82,345	102,129	106,600	99,716	116,956	114,431	126,736
Federal	986	841	1,008	1,469	1,225	4,026	6,020
Ford	266,027	179,523	250,802	315,912	202,179	225,729	186,414
F. W. D.	359	543	501	323	337	811	1,195
G. M. C.	82,296	79,612	100,285	97,200	80,407	74,857	49,187
Hudson	.....	.....	.....	.....	.....	117	2,534
International	95,404	92,788	95,184	97,818	91,164	125,203	113,151
Kenworth	747	705	668	673	396	478	487
Mack	6,890	7,138	9,794	9,906	6,862	9,795	10,917
Oshkosh	†	†	†	.....	†	173	245
Peterbilt	332	236	†	†	†	†	†
Pontiac	466	541	908	1,362	775	.....	.....
Reo	3,498	3,393	3,427	3,876	4,003	10,773	12,911
Studebaker	22,473	28,985	32,675	45,881	55,099	50,657	41,881
Ward La France	†	†	†	.....	†	271	509
White	12,261	10,858	12,260	12,050	8,318	11,603	13,066
White-Sterling	†	250	334	354	229	411	576
Willys—Jeep	9,247	8,591	9,002	8,841	14,472	48,644	47,612
Willys—Truck	8,465	11,762	15,290	15,799	18,293	27,840	2,287
All Others	794	2,433	2,214	1,767	2,826	2,722	3,724
Total	930,312	812,099	1,003,850	1,142,307	961,961	1,035,174	879,132

†—Included with "All Others."
*—Data from R. L. Polk & Co.

50 YEARS OF TRUCK AND BUS PRODUCTION*

Wholesale Value Near $31 Billion

Year	Units	Wholesale Value	Average Wholesale Price
1904	700	$1,272,747	$1,818
1905	750	1,330,000	1,773
1906	800	1,440,000	1,800
1907	1,000	1,780,000	1,780
1908	1,500	2,550,000	1,700
1909	3,297	5,333,683	1,618
1910	6,000	9,660,000	1,610
1911	10,681	21,000,000	1,966
1912	22,000	43,000,000	1,954
1913	23,500	44,000,000	1,872
1914	24,900	44,219,096	1,776
1915	74,000	125,800,000	1,700
1916	92,130	161,000,000	1,747
1917	128,157	220,982,668	1,724
1918	227,250	434,168,992	1,910
1919	224,731	371,422,820	1,653
1920	321,789	423,249,410	1,315
1921	148,052	166,070,810	1,122
1922	269,991	226,049,658	837
1923	409,295	308,537,929	754
1924	416,659	318,580,580	765
1925	530,659	458,400,277	864
1926	516,947	452,123,435	875
1927	464,793	420,130,624	904
1928	583,342	460,108,903	789
1929	881,909	622,533,897	706
1930	575,364	390,752,061	679
1931	432,262	265,444,618	614
1932	228,303	137,624,157	603
1933	329,218	175,380,863	533
1934	576,205	326,781,688	567
1935	697,367	380,997,330	546
1936	782,220	463,719,466	593
1937	891,016	537,314,633	603
1938	488,841	329,917,646	675
1939	700,377	489,786,701	699
1940	754,901	567,820,414	752
1941	1,060,820	1,069,799,855	1,008
1942	818,662	1,427,456,801	1,744
1943	699,689	1,451,794,475	2,076
1944	737,524	1,700,928,939	2,306
1945	655,683	1,181,955,532	1,803
1946	940,866	1,043,247,276	1,109
1947	1,239,443	1,731,713,000	1,397
1948	1,376,274	1,880,475,000	1,366
1949	1,134,185	1,394,035,000	1,229
1950	1,337,193	1,707,748,000	1,277
1951	1,426,828	2,323,859,000	1,629
1952	1,218,165	2,319,789,000	1,904
1953	1,206,253	2,111,532,000	1,750
50 Years	25,692,491	$30,754,618,484	$1,197

* Automobile Manufacturers Association.

TRUCK DEALERS, WHOLESALERS, INDEPENDENT REPAIR SHOPS*

(as of January each year)

Year	Wholesalers	Total Truck Dealers	Independent Repair Shops
1945	6,217	26,370	41,198
1946	6,612	27,159	42,702
1947	7,328	29,397	49,485
1948	7,982	25,998†	55,694
1949	8,338	27,574	59,906
1950	8,567	28,307	63,714
1951	8,687	30,297	71,199
1952	8,703	30,009	70,324
1953	8,968	31,149	72,452
1954	9,230	31,055	74,570

† Reduction in truck dealers due to discontinuance of Plymouth truck production.
* Trade List Department, Chilton Company.

NEW TRUCK REGISTRATIONS—BY MAKES & GVW

50% of Sales Were Under 5000 lb; Medium and Heavies Gain

	Year	5,000 lb. and less	5,001-10,000	10,001-14,000	14,001-16,000	16,001-19,500	19,501-26,000	Over 26,000	Total
AUTOCAR	1953	.....	.....	.....	.....	.....	.....	1,713	1,713
	1952	.....	.....	.....	.....	.....	.....	1,595	1,595
	1951	.....	.....	.....	.....	.....	.....	2,112	2,112
BROCKWAY	1953	.....	.....	.....	.....	109	197	1,774	2,080
	1952	.....	.....	.....	.....	84	178	1,490	1,752
	1951	.....	.....	.....	2	117	329	1,734	2,182
CHEVROLET	1953	188,739	64,398	15,115	59,708	.....	.....	.....	327,960
	1952	143,008	52,903	16,867	59,671	.....	.....	.....	272,249
	1951	191,347	70,834	20,579	67,584	.....	.....	.....	350,344
DIAMOND T	1953	.....	.....	.....	535	824	1,168	871	3,398
	1952	.....	14	1	519	1,037	1,414	435	3,420
	1951	.....	138	176	795	1,587	1,257	555	4,503
DIVCO	1953	.....	2,011	558	.....	.....	.....	.....	2,569
	1952	.....	2,166	586	.....	.....	.....	.....	2,752
	1951	.....	3,168	584	.....	.....	.....	.....	3,752
DODGE	1953	37,500	19,865	4,867	12,523	6,353	639	598	82,345
	1952	44,953	24,940	6,228	16,960	7,556	883	603	102,129
	1951	50,712	25,352	6,457	14,223	8,528	879	449	106,600
FEDERAL	1953	.....	.....	2	7	251	426	300	986
	1952	.....	.....	5	26	152	347	311	841
	1951	.....	.....	20	139	268	448	133	1,008
FORD	1953	145,548	44,213	15,045	42,563	8,424	9,365	869	266,027
	1952	74,145	32,602	18,072	42,027	4,671	8,006	.....	179,523
	1951	117,934	43,994	29,398	44,827	5,919	8,760	.....	250,802
F.W.D.	1953	.....	.....	.....	21	93	195	50	359
	1952	.....	.....	.....	26	93	346	78	543
	1951	.....	.....	.....	22	70	372	37	501
G.M.C.	1953	31,679	14,284	3,996	15,033	7,184	5,449	4,671	82,296
	1952	29,471	14,396	3,525	16,317	6,346	4,761	4,796	79,612
	1951	40,948	18,319	5,435	18,038	6,699	8,142	2,704	100,285
INTERNATIONAL	1953	32,258	16,423	2,902	17,053	11,406	8,118	6,244	95,404
	1952	27,643	16,654	3,580	19,808	11,767	8,771	4,565	92,788
	1951	28,166	18,829	3,652	19,864	10,897	10,034	3,742	95,184
KENWORTH	1953	.....	.....	.....	.....	.....	.....	747	747
	1952	.....	.....	.....	.....	.....	.....	705	705
	1951	.....	.....	.....	.....	.....	2	666	668
MACK	1953	.....	.....	.....	.....	180	1,900	4,810	6,890
	1952	.....	.....	.....	.....	212	2,338	4,588	7,138
	1951	.....	.....	.....	3	1,098	2,847	5,846	9,794
PETERBILT	1953	.....	.....	.....	.....	.....	.....	332	332
	1952	.....	.....	.....	.....	.....	.....	236	236
	1951	.....	.....	.....	.....	.....	.....	301	301
PONTIAC	1953	468	.....	.....	.....	.....	.....	.....	468
	1952	541	.....	.....	.....	.....	.....	.....	541
	1951	908	.....	.....	.....	.....	.....	.....	908
REO	1953	.....	.....	.....	988	297	1,985	228	3,498
	1952	.....	.....	.....	1,154	177	1,976	86	3,393
	1951	.....	.....	.....	958	657	1,760	52	3,427
STUDEBAKER	1953	12,877	4,442	2,861	2,293	.....	.....	.....	22,473
	1952	17,245	4,680	4,285	2,775	.....	.....	.....	28,985
	1951	20,644	5,466	4,056	2,509	.....	.....	.....	32,675
WHITE	1953	.....	.....	.....	.....	1,692	6,614	3,955	12,261
	1952	.....	.....	.....	592	1,054	6,966	2,246	10,858
	1951	.....	.....	.....	912	947	8,276	2,125	12,260
WILLYS-JEEP	1953	9,247	.....	.....	.....	.....	.....	.....	9,247
	1952	8,594	.....	.....	.....	.....	.....	.....	8,594
	1951	9,002	.....	.....	.....	.....	.....	.....	9,002
WILLYS-TRUCK	1953	1,372	7,003	.....	.....	.....	.....	.....	8,465
	1952	3,557	8,205	.....	.....	.....	.....	.....	11,762
	1951	9,091	6,109	.....	.....	.....	.....	.....	15,290
ALL OTHERS	1953	309	3	7	5	7	167	276	794
	1952	1,582	.....	.....	.....	.....	330	771	2,683
	1951	873	5	21	24	3	455	1,167	2,548
TOTAL	1953	460,997	172,732	45,353	150,729	36,820	36,243	27,438	930,312
	1952	350,739	156,560	52,949	159,881	33,149	36,316	22,505	812,099
	1951	469,625	192,274	70,378	169,900	36,790	43,561	21,322	1,003,850
	1950	556,571	232,465	84,018	169,869	37,606	40,695	21,083	1,142,307
	1949	438,316	230,293	78,382	142,064	35,576	23,831	13,499	961,961
% OF TOTAL	1953	49.55%	18.57%	4.87%	16.20%	3.96%	3.90%	2.95%	100.00%
	1952	43.19%	19.28%	6.52%	19.69%	4.08%	4.47%	2.77%	100.00%
	1951	46.80%	19.15%	7.01%	16.92%	3.66%	4.34%	2.12%	100.00%
	1950	48.72%	20.35%	7.36%	14.87%	3.29%	3.56%	1.85%	100.00%
	1949	45.56%	23.94%	8.15%	14.77%	3.70%	2.48%	1.40%	100.00%

Based on data from R. L. Polk & Co.

1953 NEW TRUCK REGISTRATIONS BY MAKES, BY STATES*

Texas Leads in New Truck Sales for 1953; California and New York Strong

STATE	Auto-car	Brock-way	Chev-rolet	Dia-mond T	Divco	Dodge	Fed-eral	Ford	FWD	GMC	Inter-na-tional	Ken-worth	Mack	Peter-bilt	Pon-tiac	Reo	Stude-baker	White	Willys	All Others	Total
Alabama	13	1	7996	24	29	1706	7	5575		2073	1299	1	121			28	405	217	158		19,653
Arizona	2		2511	14	6	623		1879	2	839	652	34	45	3	4	51	233	67	193	2	7,160
Arkansas	3		6958	15		1276	4	5832	1	2126	1349		20		2	18	482	109	162		10,357
California	123	6	24670	283	146	7707	10	17888	74	7424	5622	219	262	222	56	232	1849	595	1786	171	69,345
Colorado	30		3790	70	36	826	9	3106	13	1109	1236	16	65	8	3	30	266	55	511	1	11,10[illegible]
Connecticut	49	51	2485	114	95	827	43	2067		686	925	1	182		5	65	261	143	206	9	6,214
Delaware	10	12	1073	6	5	274	5	695		189	308		30			9	81	17	20		2,734
District of Columbia	14	1	938	13	39	447	2	568		302	276		18		2	24	12	25	46	1	2,729
Florida	18		7924	62	67	2216	14	6524		2084	1873	7	355		3	120	805	410	844	14	23,340
Georgia	14	6	9011	54	13	2009		7015		2186	1877		122		7	43	690	232	160	2	23,441
Idaho			2248	21	2	703	2	1844	6	952	995	54	60	10	2	15	241	31	412	9	7,807
Illinois	24		15208	423	116	4175	10	11910	9	3104	5810	3	160		16	128	1082	595	573	90	43,430
Indiana	23	1	9898	103	137	2481	24	8124	3	2111	3807	2	122		10	114	1058	687	374	29	29,109
Iowa	4		7064	75	46	1390	2	6318	10	1142	3159	6	53		10	46	446	197	203	17	20,199
Kansas	2		7042	35	19	1096		5277	2	1752	2236		11		6	13	415	120	249	2	18,277
Kentucky	2		7032	40	24	1295	18	5685	2	1708	1625		44		14	74	464	117	381		18,525
Louisiana	10		7568	39	20	1443	2	6104		1890	1764		49		5	11	553	109	227	1	19,795
Maine	10	9	1760	33	12	541	2	1446	1	575	550		96		7	15	190	46	259	7	5,509
Maryland	23	66	3751	25	26	1504	39	2994	3	814	1196		152		6	40	225	213	119	3	11,199
Massachusetts	86	83	3643	94	135	1241	17	3313	8	893	1247		277		20	195	409	286	316	28	12,291
Michigan	72	3	14409	170	328	4162	175	13963	4	3253	2494		128		18	293	550	304	457	12	40,795
Minnesota	1		6461	99	60	1483	17	5767	21	1404	2639	6	72		14	79	490	136	291	14	19,864
Mississippi	2		7381	3		1188		5359	1	2209	1567		25		4	2	440	53	149		18,374
Missouri	13		11631	67	113	2025	1	8213	3	2899	2602		84		4	67	666	408	289	2	29,987
Montana	2		2488	8	5	504	2	2262	2	738	1112	39	30	1	3	14	240	51	493	7	8,801
Nebraska	11		4437	98	20	644		3895	10	1120	1978	22	56	2	3	17	281	129	355	45	13,122
Nevada			614	1		240		537	1	321	159	1	9			2	116	4	125		2,130
New Hampshire	4	11	970	6	12	252		757	1	261	271		67		3	26	88	14	174	7	2,924
New Jersey	123	318	7509	134	156	2046	71	7047	8	1958	2169		438		17	75	463	624	333	11	23,560
New Mexico	3		2597	23	2	402	4	1607	5	741	494	14	101	2	4	16	207	59	146	1	6,428
New York	424	729	14415	391	118	5650	148	12029	23	3572	5681		1029		31	460	915	924	1138	117	47,704
North Carolina	14		10188	52	50	1983	5	7941	1	2445	2169		288		8	25	711	417	378	12	26,886
North Dakota	2		1869	4	2	389		1932		464	1216		6			3	147	6	85	3	6,128
Ohio	108	19	13291	152	219	4339	98	13029	14	2829	5085		372		24	282	857	1049	720	23	42,910
Oklahoma	8		8617	7	24	1331	1	6580	27	2474	2183	5	37		7	38	506	234	179	1	22,257
Oregon	26		3867	86	26	1215	7	3526	8	1548	1606	92	106	53	4	46	274	174	738	11	13,415
Pennsylvania	195	731	14869	215	201	5502	143	12708	7	3454	6007		750		49	329	986	1019	764	36	47,965
Rhode Island	37	2	804	39	18	284		761	4	152	308		43		2	17	94	65	31	1	2,682
South Carolina	3		5516	4	5	989		3439		1137	752		60		3		317	97	70	5	12,397
South Dakota			1641	34	3	416	2	1452	1	485	1034	4	1		4	7	146	21	213	1	5,463
Tennessee	3	6	7933	35	15	1813	44	6207		1958	1866		109		2	35	428	221	206	1	20,881
Texas	143		30025	139	38	5012	28	23099	5	6142	6044	41	267		36	112	1748	1145	818	15	74,857
Utah	2		1594	31	4	368	3	1325	3	454	545	20	38	9	3	24	86	42	194	3	4,748
Vermont		13	766	9	4	281	3	561	3	298	389		27		2	12	70	12	247	8	2,709
Virginia	31	12	6440	19	46	1666	6	5067		1551	1453		182		7	71	497	299	333	5	17,695
Washington	3		4048	49	22	1478		3510	2	1594	1720	154	125	21	6	50	266	178	467	25	13,710
West Virginia	8		3243	8	26	1032	6	2826		904	826		104		14	16	189	83	433	6	9,724
Wisconsin	14		6298	58	77	1598	12	5306	69	1458	2635	1	75		15	110	439	203	389	36	18,794
Wyoming	1		1469	4		273		1158	2	513	594	3	17	1	3	1	89	19	330		4,477
Total 1953	1713	2080	327960	3398	2569	82345	986	266027	359	82296	95404	747	6890	332	468	3498	22473	12261	17712	794	938,312
Total 1952	1595	1752	272249	3420	2752	102129	841	179523	543	79612	92788	705	7138#	236	541	3393	28985	11108	20356	2433	812,099

* Data from R. L. Polk & Co.

TRUCKS IN USE BY MAKES AND BY MODEL YEAR

Chevrolet, Dodge, Ford and IHC Make up 80% of Total Registrations

Model Year	Auto-car	Brock-way	Chev-rolet	Cros-ley	Dia-mond T	Divco	Dodge	Fed-eral	Ford	FWD	GMC	Inter-na-tional	Ken-worth	Mack	Reo	Ster-ling	Stude-baker	White	Willys	All Others	Total
1953	959	1,091	148,719		2,248	1,463	56,090	485	84,293	152	50,412	51,771	444	3,410	2,134	129	14,733	6,396	10,964	4,973	440,866
1952	1,505	1,670	250,495	408	3,303	2,848	98,304	815	187,074	347	77,048	94,814	818	6,914	3,089	231	28,024	10,084	15,722	7,826	791,339
1951	1,941	2,183	351,966	498	4,249	3,964	90,133	1,012	250,591	438	87,767	94,479	776	9,444	3,202	341	33,002	11,711	29,297	9,760	996,754
1950	1,731	2,135	375,457	391	4,762	4,335	104,039	997	300,697	265	99,197	84,482	696	8,523	2,850	329	37,069	11,179	27,612	11,685	1,078,431
1949	1,356	1,351	312,206	373	4,112	3,525	104,285	853	188,930	256	67,141	93,189	384	5,823	3,074	207	70,709	6,637	31,566	10,074	906,853
1948	2,309	2,388	277,708	1,615	8,981	5,706	102,793	2,666	210,600	484	68,155	110,010	472	7,721	6,842	338	26,225	9,797	63,640	8,265	918,715
1947	3,627	3,250	184,615	1,309	8,324	5,633	105,308	3,772	153,298	1,137	41,555	102,550	503	10,456	7,434	490	35,232	11,095	35,687	7,268	722,543
1946	3,727	2,751	223,774	46	3,905	4,140	94,715	2,553	144,876	687	21,126	72,597	430	3,529	6,317	439	21,986	7,671	30,583	5,701	651,553
1945	1,711	1,477	25,884	21	2,225	1,658	16,080	1,106	34,089	320	8,743	21,639	336	3,525	1,772	299	2,361	4,663	3,482	2,108	133,499
1944	846	734	11,375	14	965	259	5,383	489	13,533	96	3,907	10,590	125	1,973	342	178	1,214	2,126	1,529	965	56,643
1943	130	57	2,106	1	183	112	1,679	239	7,213	28	1,868	2,767	37	279	131	30	472	753	2,499	525	21,109
1942	584	184	64,814	54	911	591	25,681	470	50,390	106	15,278	19,084	85	1,602	814	158	1,545	2,010	5,616	2,236	192,213
1941	1,507	1,197	136,789	37	2,922	2,275	49,984	566	110,727	188	26,217	54,415	215	5,357	808	207	4,011	4,260	2,665	10,795	415,142
1940	839	649	102,078	27	2,399	1,434	30,736	424	77,583	116	17,740	36,254	173	3,516	183	198	1,035	1,722	2,015	9,754	288,875
1939	729	596	72,592	26	1,751	1,206	25,081	297	53,879	121	11,888	26,691	87	2,639	261	127	1,134	1,217	737	7,535	208,594
1938	452	377	47,978	10	1,342	767	13,428	197	36,666	117	6,292	21,027	71	1,511	709	72	724	974	953	5,126	138,793
1937	501	364	70,857	11	1,925	170	20,772	301	58,752	179	12,912	19,831	74	1,458	774	80	1,675	1,326	1,330	9,769	203,061
1936	295	335	50,963	9	1,575	229	22,283	306	54,552	168	5,427	15,010	66	904	441	74	569	1,073	419	4,063	158,791
1935	155	126	24,223	6	795	88	9,781	180	39,397	109	1,109	8,002	45	406	427	34	265	387	291	2,301	88,127
Before '35	533	285	46,726	13	1,288	140	10,129	427	136,268	207	2,077	8,405	137	2,994	1,491	190	991	1,377	631	11,043	225,352
Unid.*	113	91	11,764	79	328	229	4,686	106	13,148	78	3,198	3,971	50	472	242	29	1,376	522	1,809	23,860	66,151
Total	25,550	23,291	2,793,091	4,948	58,493	40,772	991,370	18,261	2,206,556	5,599	629,057	951,578	6,024	82,456	45,337	4,180	284,352	96,980	269,047	155,632	8,682,574

Unid.*—Unidentified as to model year. Based on data from The Reuben H. Donnelley Corp. (As of July 1, 1953.)

JANUARY, 1954, NEW TRUCK REGISTRATIONS BY MAKES, BY STATES*

First Month Truck Sales For Most Makes Below Last Year's Figures

STATE AND MONTH	Auto-car	Brock-way	Chev-rolet	Dia-mond T	Divco	Dodge	Fed-eral	Ford	FWD	GMC	Inter-na-tional	Ken-worth	Mack	Peter-bilt	Reo	Stude-baker	White	Willys Jeep	Willys Truck	All Others	Total
Alabama			362		1	64		302		69	85		6		1	13	22		5		930
Arizona			141	1		37		134	1	53	42	4			1	4	1	6	5		430
Arkansas			462	1		92		478		181	111		1		1	18	1	9	2		1,357
California	11	3	1703	15	9	454	2	1409	6	509	365	16	7	21	9	49	19	37	35	8	4,667
Colorado	1		344	2	4	60		242	3	74	107	2	3		6	15	1	19	8	2	893
Connecticut	16	6	153	1	8	58	2	133		33	38		7		2	14	7		3		481
Delaware		1	63		2	18		55		32	12		4			3	1	3		1	195
District of Columbia			53			10		24		11	15		2				3		1	1	120
Florida	1		554	6	11	123		563		126	172		34		10	29	51	2	21	1	1,704
Georgia	1		767	1	2	206		777		212	209		15		5	53	30	22	5		2,305
Idaho			115			34		92		48	30	1				6	1	8	11		346
Illinois	2		1051	38	15	237		916	6	197	378		13		4	31	48	9	11	3	2,959
Indiana	3		757	13	9	183		610		161	311	1	14		19	45	54	12	13	2	2,207
Iowa			409	2		71		313		83	151	6				19	11	6	3		1,074
Kansas			368	2	1	58		316		91	121					17	5	6	5		990
Kentucky	1		509	3	3	70		413	6	93	139		5		7	10	13	15	13	6	1,308
Louisiana			644	3	1	128		610		158	153		3		1	38	7	31	7		1,784
Maine			115	2	3	33		103		36	27		4		1	10	1	1	5		341
Maryland	1	4	200	1		90	2	170		26	80		8			4	10	6	4		808
Massachusetts	3	9	226	6	9	65	1	251		55	54		16		6	14	37	17	7	1	777
Michigan	3		1087	8	20	271	5	1013		267	164		8		19	30	22	23	10	2	2,952
Minnesota			336		10	80	7	272	4	92	131		5		7	10	3	20	7	1	985
Mississippi			445			64		394		113	99		3	1		16	1	4	2		1,142
Missouri			818	2	13	179		732		251	255		11		5	41	21	11	4		2,343
Montana			137	2		37		113		60	60	2	1			12		19	29		472
Nebraska			261	5	1	54		263		73	112	2	3	1	1	6	5	17	17	4	825
Nevada			31			4		26		8	7					3		2	3		84
New Hampshire	2	1	68		1	21		42		20	17		6			4		8	5	1	196
New Jersey	6	20	478	12	20	147	2	414	1	163	142	1	46		8	34	45	17	6	5	1,567
New Mexico			223	2		24		132		42	40		22		2	6	5	8	7	1	514
New York	8	31	956	14	6	359	3	856	1	200	377		50		21	35	95	47	31	17	3,107
North Carolina	3		599	14	1	107		501		167	129		16		1	29	43	14	12	1	1,637
North Dakota			126			24		115	1	40	76		1			4		5	4		396
Ohio	3		954	11	22	222	1	883	1	156	271		22		15	34	62	2	11	3	2,673
Oklahoma			384			72		321	2	99	81		4		2	8	7	3	2		985
Oregon			160	1	2	55		168		62	60	2	5			3	5	13	17	1	554
Pennsylvania	9	23	849	5	16	357	2	722		155	325		31		12	35	72	20	31	6	2,670
Rhode Island	3		46	8		19		57		10	23		2			6	5		1		180
South Carolina	1		366	1		106		392		78	57		9			18	15	3	2	2	1,050
South Dakota			88		1	18		75		28	65	1			1	5	2	11	8		303
Tennessee			501	2	2	101	3	439		94	79		8		1	6	9	6			1,251
Texas	10		2051	7	1	339		1769		418	458	1	16		6	74	76	23	10	1	5,260
Utah			86	3		23		74		32	43	3	3	1		1	2	1	5		277
Vermont			37	1	1	8		43		13	18		4					11	6		142
Virginia	1	1	405			104	1	367		80	90		11		2	14	29	7	5	2	1,110
Washington			134	1	3	80		139		60	69	10	2		2	3		7	5		515
West Virginia	3		205	3		51	2	158		55	44		3			4	6	19	8	3	562
Wisconsin			394	4	6	95		343	1	72	149		2		3	26	15	15	8	9	1,142
Wyoming			105	2		28	1	91		37	41		1			5		5	4		320
Total ... January, 1954	92	99	21326	205	204	5140	34	18825	33	5193	6082	52	437	24	181	864	859	550	422	84	60,706
Total ... January, 1953	95	154	25174	247	149	7655	127	18328	38	7068	7737	52	490	21	283	2210	780	826	1038	134	72,606

* Data from R. L. Polk & Co.

NUMBER AND PER CENT OF TRUCKS IN USE, BY AGE GROUPS*

Reveals Average Age of All Trucks in Use is Now 6.6 Years

Age in Years	1953 Units	1953 % of Total Simple	1953 % of Total Cumul.	1952 Units	1952 % of Total Simple	1952 % of Total Cumul.	1951 Units	1951 % of Total Simple	1951 % of Total Cumul.	1950 Units	1950 % of Total Simple	1950 % of Total Cumul.
Under 1	440,866	5.11	5.11	366,700	4.39	4.39	511,222	6.38	6.38	549,909	7.31	7.31
1- 2	791,329	9.17	14.28	995,740	11.94	10.30	1,091,802	13.63	20.01	942,603	12.53	19.84
2- 3	986,754	11.44	25.72	1,102,081	12.22	29.55	944,752	11.80	31.81	982,383	13.07	32.91
3- 4	1,078,431	12.50	38.22	935,084	11.21	40.76	971,056	12.13	43.94	810,705	10.77	43.68
4- 5	906,053	10.50	48.72	953,949	11.43	52.10	787,053	9.83	53.77	742,736	9.87	53.55
5- 6	918,715	10.65	59.37	762,089	9.13	61.32	717,101	8.95	62.72	166,019	2.21	55.76
6- 7	722,543	8.38	67.75	691,537	8.29	69.61	158,353	1.98	64.70	73,970	.98	56.74
7- 8	651,553	7.55	75.30	148,180	1.78	71.30	70,012	.87	65.57	23,632	.31	57.05
8- 9	133,499	1.55	76.85	64,312	.77	72.16	24,438	.31	65.88	264,297	3.51	60.56
9-10	56,643	.66	77.51	23,037	.28	72.44	243,376	3.04	68.92	586,264	7.79	68.35
10-11	21,109	.24	77.75	222,124	2.66	75.10	533,623	6.66	75.58	429,734	5.71	74.06
11-12	192,213	2.23	79.98	475,918	5.70	80.80	381,843	4.77	80.35	326,111	4.33	78.39
12-13	415,142	4.81	84.79	335,983	4.03	84.83	285,620	3.57	83.92	231,091	3.07	81.46
13-14	288,875	3.25	88.14	245,627	2.94	87.77	199,547	2.49	86.41	364,745	4.85	86.31
14-15	208,594	2.42	90.56	167,136	2.00	89.77	305,483	3.81	90.22	315,551	4.19	90.50
15-16	138,793	1.61	92.17	249,710	2.99	92.76	252,774	3.16	93.38	184,506	2.45	92.95
16-17	203,061	2.35	94.52	199,759	2.39	95.19	144,376	1.80	95.18	121,313	1.62	94.57
17-18	158,761	1.84	96.36	111,671	1.34	96.40	385,706	4.82	.....	408,316	5.43	.....
18-19	88,127	1.02	97.38	70,835	.85	97.84	.....	.....	.....	.....	.....	.....
19 and older	225,352	2.62	.....	221,363	2.66	.....	.....	.....	.....	.....	.....	.....
Total	8,626,423	100.00	100.00	8,343,835	100.00	100.00	8,009,108	100.00	100.00	7,524,884	100.00	100.00
Age not known	66,151	.....	.....	76,020	.....	.....	56,775	.....	.....	52,153	.....	.....
Total in use	8,692,574	.....	.....	8,419,855	.....	.....	8,064,883	.....	.....	7,577,037	.....	.....
Average age of known models	6.59 yrs.			6.60 yrs.			6.55 yrs.			6.96 yrs.		

* Based on data from Reuben H. Donnelley Corp. as of July 1, of each year.

MOTOR TRUCK FACTORY SALES BY G.V.W., 1946-1953*

	5,000 lb. and Less		5,001–10,000 lb.		10,001–14,000 lb.		14,001–16,000 lb.		16,001–19,500 lb.		19,501–26,000 lb.		Over 26,000 lb.		Total	
	Units	% of Total	Units	% of Total	Units	% of Total	Units	% of Total	Units	% of Total	Units	% of Total	Units	% of Total	Units	% of Total
Total Factory Sales from U. S. Plants																
1953	563,109	46.8	221,817	18.5	46,624	3.9	185,115	15.4	49,628	4.1	86,773	7.2	49,130	4.1	1,202,196	100
1952	505,218	41.7	234,568	19.3	56,308	4.6	219,285	18.1	45,617	3.8	105,451	8.7	45,943	3.8	1,212,390	100
1951	587,649	41.5	260,360	18.4	99,140	7.0	278,103	19.5	68,899	4.9	81,066	5.7	42,151	3.0	1,417,368	100
1950	627,389	47.1	266,043	20.0	89,156	6.7	219,918	16.5	53,484	4.0	47,022	3.5	29,235	2.2	1,332,247	100
1949	513,148	45.5	279,359	24.8	84,605	7.5	173,137	15.3	37,227	3.3	23,798	2.1	17,351	1.5	1,128,625	100
1948	485,088	35.6	267,720	19.6	182,500	13.4	280,535	20.6	76,711	5.6	50,023	3.7	21,279	1.5	1,363,856	100
1947	375,445	30.8	182,490	14.9	265,989	21.8	285,589	23.4	41,606	3.4	42,761	3.5	26,754	2.2	1,220,634	100
1946	330,730	35.5	88,235	9.5	247,912	26.6	200,574	21.6	24,162	2.6	25,252	2.7	13,874	1.5	930,739	100
Factory Sales for Domestic Use																
1953	512,655	48.3	196,910	18.5	39,649	3.7	147,737	13.9	40,519	3.8	80,146	7.5	45,965	4.3	1,063,581	100
1952	453,957	43.2	208,935	19.7	47,494	4.5	168,771	16.1	33,121	3.1	97,560	9.3	42,892	4.1	1,050,730	100
1951	516,391	43.2	229,065	19.2	84,183	7.0	199,967	16.7	53,568	4.6	72,328	6.0	38,958	3.3	1,194,460	100
1950	579,760	49.0	243,980	20.6	75,993	6.4	169,949	14.4	42,756	3.6	42,144	3.6	27,820	2.4	1,182,402	100
1949	469,255	47.0	258,035	25.9	70,969	7.1	135,604	13.6	28,396	2.8	19,780	2.0	15,569	1.6	997,608	100
1948	420,531	36.2	244,894	21.1	150,340	12.9	217,695	18.7	64,297	5.5	45,120	3.9	19,712	1.7	1,162,589	100
1947	314,662	32.4	165,707	17.0	197,275	20.3	198,705	20.4	34,660	3.6	36,723	3.8	23,873	2.5	971,605	100
1946	291,827	39.2	78,925	10.6	182,000	24.4	137,054	18.4	19,293	2.6	22,474	3.0	13,058	1.8	744,631	100

*—Automobile Manufacturers Association.

MOTOR BUS FACTORY SALES—BY TYPE OF BUS

Does Not Include Non-Integral School Buses

Year	Domestic Market: City Type	Intercity Type	Special Type†	Total Domestic Market	Total Foreign Market	Total Factory Sales
1953	2,290	855	586	3,731	326	4,057
1952	1,997	691	1,823	4,511	864	5,375
1951	4,754	1,233	2,797	8,784	676	9,460
1950	2,748	581	683	4,012	896	4,908
1949	3,402	690	802	4,894	617	5,511
1948	6,971	2,558	997	10,526	1,773	12,299
1947	11,779	3,451	1,400	16,650	2,460	19,110
1946	6,764	2,276	159	9,199	892	10,091

†—Includes integral school buses. As reported by the Automobile Manufacturers Association.

REVENUE MOTOR BUS FACTORY SALES

From Plants Located in the United States

	1953	1952	1951	1950	1949	1948	1947	1946	1944	1943	1942
January	254	778	661	219	658	1,382	1,273	447	231	227	901
February	190	625	521	133	418	1,101	1,303	285	245	226	828
March	236	569	829	199	545	1,430	1,421	527	336	102	929
April	145	597	819	268	514	1,056	1,650	948	352	76	875
May	367	423	742	412	564	1,288	1,853	789	367	33	938
June	380	484	838	598	632	1,068	1,628	774	293	54	875
July	376	224	665	397	439	1,012	1,806	862	381	15	879
August	447	349	783	457	444	771	1,765	1,067	470	48	263
September	348	387	743	423	298	1,143	1,607	833	563	145	557
October	519	389	1,174	553	322	679	1,667	975	594	162	376
November	371	319	833	584	308	545	1,416	1,146	484	199	419
December	424	231	845	665	369	824	1,721	1,438	1,483	336	497
Total	4,057	5,375	9,453	4,908	5,511	12,299	10,110	10,091	5,799	1,613	8,337

As reported by the Automobile Manufacturers Association.

INTERCITY PASSENGER-MILES TRAVELED BY MODE OF TRANSPORTATION*

In Billions of Passenger Miles

Year	Total Intercity Travel	Private Automobiles: Miles	% of Total	Railroads: Miles	% of Total	Intercity Buses: Miles	% of Total	Air Lines: Miles	% of Total	Waterways: Miles	% of Total
1941	307.6	264.3	85.9	26.5	8.6	13.6	4.4	1.4	0.5	1.8	0.6
1942	274.6	199.6	72.7	50.3	18.3	21.4	7.8	1.4	0.5	1.9	0.7
1943	261.2	147.1	56.0	84.6	32.2	26.0	10.4	1.6	0.7	1.9	0.7
1944	275.4	151.3	55.1	92.2	33.6	27.4	9.7	2.3	0.8	2.2	0.8
1945	300.9	179.8	59.9	88.1	29.3	27.5	9.0	3.4	1.1	2.1	0.7
1946	349.1	253.6	72.8	60.4	17.3	26.9	7.5	5.9	1.7	2.3	0.7
1947	346.3	273.0	78.8	40.8	11.8	24.6	7.1	6.1	1.8	1.8	0.5
1948	355.6	287.4	80.9	36.0	10.1	24.3	6.8	6.2	1.7	1.7	0.5
1949	379.1	316.7	83.6	30.5	8.0	23.3	6.1	7.2	1.9	1.4	0.4
1950	396.9	337.3	85.1	27.5	6.9	22.3	5.5	8.6	2.2	1.2	0.3
1951	445.8	379.3	85.1	30.4	6.8	23.4	5.2	11.4	2.6	1.3	0.3
1952	477.6	410.3	85.9	29.9	6.3	22.5	4.7	13.5	2.8	1.4	0.3

*—Compiled by NAMBO from records of Interstate Commerce Commission.

TRANSIT RIDERS BY TYPE OF SERVICE*

(Millions of Persons)

Year	Railway: Surface	Subway and Elevated	Total	Trolley Coach	Motor Bus	Grand Total
1943	9,150	2,656	11,806	1,175	9,019	22,000
1944	9,516	2,621	12,137	1,234	9,646	23,017
1945	9,426	2,698	12,124	1,244	9,886	23,254
1946	9,027	2,835	11,862	1,311	10,199	23,372
1947	8,096	2,756	10,852	1,356	10,332	22,540
1948	6,506	2,606	9,112	1,528	10,728	21,368
1949	4,839	2,346	7,185	1,661	10,162	19,008
1950	3,904	2,264	6,168	1,658	9,420	17,246
1951	3,101	2,189	5,290	1,633	9,202	16,125
1952	2,477	2,124	4,601	1,640	8,878	15,119
1953[1]	2,058	2,039	4,097	1,571	8,234	13,902

*—American Transit Association. [1]—Preliminary data.

NEW TRANSIT BUSES DELIVERED*

by Seating Capacity—1943 to 1953

Year	Seating Capacity: 29 or less	30 to 39	40 or more	Total Buses
1943	847	179	225	1,251
1944	2,423	369	1,015	3,807
1945	1,757	1,183	1,501	4,441
1946	1,849	2,429	2,185	6,463
1947	1,951	3,717	6,361	12,029
1948	523	2,144	4,342	7,009
1949	289	1,344	1,725	3,358
1950	205	852	1,611	2,668
1951	148	1,711	2,693	4,552
1952	36	548	1,165	1,749
1953†	34	517	1,679	2,230

*—American Transit Association. †—Preliminary.

TRAILER REGISTRATIONS

1953 Trailers and Semi-Trailers

State	Tourist	Commercial	Total
Alabama	.....	14,983	14,983
Arizona	16,809	14,621	31,430
Arkansas	.....	.....	22,309
California	.....	438,399	438,399
Colorado	.....	32,752	32,752
Connecticut	17,756	8,962	26,718
Delaware	.....	.....	5,278
District of Columbia	.....	.....	1,644
Florida	39,550	72,291	111,841
Georgia	25,921	12,319	38,240
Idaho	.....	.....	32,000
Illinois	52,690	50,000	102,690
Indiana	.....	.....	105,400
Iowa	.....	.....	111,793
Kansas	.....	.....	17,613
Kentucky	.....	.....	.....
Louisiana	2,444	39,093	41,537
Maine	.....	.....	24,000
Maryland	.....	19,685	19,685
Massachusetts	.....	.....	66,159
Michigan	17,502	242,861	260,363
Minnesota	5,711	135,180	140,891
Mississippi	20,400	7,650	28,050
Missouri	.....	87,000	87,000
Montana	.....	17,754	17,754
Nebraska	4,000	9,000	13,000
Nevada	.....	.....	7,306
New Hampshire	.....	.....	10,422
New Jersey	.....	.....	32,568
New Mexico	.....	.....	10,940
New York	.....	.....	121,869
North Carolina	.....	.....	83,615
North Dakota	775	374	1,149
Ohio	.....	.....	199,578
Oklahoma	2,584	13,059	15,643
Oregon	.....	.....	.....
Pennsylvania	.....	.....	104,956
Rhode Island	.....	8,108	8,108
South Carolina	2,875	13,014	15,889
South Dakota	.....	.....	32,743
Tennessee	.....	.....	.....
Texas	18,929	138,133	157,062
Utah	.....	3,119	3,119
Vermont	.....	.....	7,494
Virginia	28,526	14,546	43,072
Washington	3,498	58,049	61,547
West Virginia	685	244	929
Wisconsin	7,528	24,901	32,429
Wyoming	.....	.....	16,788
Total	268,183	1,475,917	2,758,755

TRUCK TRAILER SHIPMENTS BY TYPE*

Type of Trailer	1953	1952	1951	1950
Vans				
Insulated and refrigerated	.....	3,382	3,895	3,992
Steel	879	895	.....	.....
Aluminum	3,187	2,487	.....	.....
Furniture	1,450	1,437	(a)	(a)
Steel	1,450	1,437	.....	.....
Aluminum	.....	.....	.....	.....
All other closed top	22,129	17,199	23,871	31,554
Steel	11,566	9,016	.....	.....
Aluminum	10,563	8,183	.....	.....
Open top	3,847	2,656	3,104	3,951
Steel	1,738	1,252	.....	.....
Aluminum	2,109	1,404	.....	.....
Total Vans	31,492	24,674	30,870	39,497
Tanks				
Petroleum	3,808	4,336	5,065	3,812
Food	.....	294	.....	.....
L.P.G.	839	132	.....	.....
All other	.....	338	617	259
Total Tanks	4,647	5,100	5,682	4,071
Pole, pipe and logging				
Single axle	608	982	1,215	1,447
Tandem axle	981	1,485	1,734	1,168
Total	1,589	2,467	2,949	2,615
Platforms				
Racks, livestock and stake	4,195	4,151	1,951	1,648
Grain bodies	897	1,182	926	665
Flats (all types)	9,016	7,729	10,328	9,073
Total Platforms	14,108	13,062	13,205	11,386
Low-bed heavy haulers	5,401	5,529	4,028	1,783
Dump trailers	990	947	1,156	881
All other trailers (b)	35,707	2,809	3,536	3,386
Total Complete Trailers	93,934	54,586	61,426	63,619
Trailer chassis	3,324	3,385	3,265	2,347
Total Trailer and Chassis	97,258	57,973	64,691	65,966

(a)—Included with all other closed-top vans. (b)—Includes off-highway, auto transport, public utility trailers, and converter dollies.

*—As reported by Industry Division, Bureau of the Census.

TRUCK TRAILER SHIPMENTS BY YEARS, 1946-1953*

	Production	Shipments Units	Shipments Value
1953	97,689	97,258	$293,521,000
1952	57,078	57,973	228,378,000
1951	67,384	64,691	245,315,000
1950	64,617	65,966	229,685,000
1949	33,097	34,273	119,098,000
1948	44,478	46,960	139,996,000
1947	53,096	55,372	138,383,000
1946	76,234	73,001	151,384,000

* Industry Division, Bureau of the Census.

TRUCK TRAILER SHIPMENTS BY MONTHS

In Units and Their Values*

	1953 Shipments	1953 Value	1952 Shipments	1952 Value
January	5,674	$ 22,843,000	4,941	$ 19,411,000
February	5,921	23,769,000	4,633	18,637,000
March	6,758	26,508,000	5,259	20,676,000
April	7,803	29,128,000	5,308	20,126,000
May	9,379	28,968,000	5,166	19,758,000
June	9,580	26,416,000	4,027	16,445,000
July	10,265	24,526,000	3,934	16,656,000
August	9,741	25,013,000	4,421	16,293,000
September	9,822	23,893,000	4,916	19,803,000
October	8,604	23,028,000	5,414	21,388,000
November	7,454	20,117,000	4,908	19,155,000
December	6,257	19,312,000	5,046	20,020,000
Total	97,258	$293,521,000	57,973	$228,378,000

* As reported by Industry Division, Bureau of the Census.

FACTORY SALES OF SPECIAL TYPES OF VEHICLES*

Vehicle Type	Units
1953	
Station Wagons(1)	318,178
Motor Coaches	4,057
School Bus Chassis	21,284
Trucks with Cab-Over-Engine	24,711
Trucks with Diesel Engines	10,872
Multi-Stop Trucks	19,246
Ambulances and Funeral Vehicles	3,034
1952	
Station Wagons(1)	189,651
Motor Coaches(2)	5,375
School Bus Chassis	19,452
Trucks with Cab-Over-Engine	19,592
Trucks with Diesel Engines	13,165
Multi-Stop Trucks	18,493
Ambulances and Funeral Vehicles	2,662
1951	
Station Wagons(1)	194,233
Motor Coaches(2)	9,460
School Bus Chassis	31,891
Trucks with Cab-Over-Engine	25,482
Trucks with Diesel Engines	16,494
Trucks with 6 Wheels, 3 Axles	36,429
Multi-Stop Trucks	28,867
Ambulances and Funeral Vehicles	4,177
1950	
Station Wagons(1)	159,944
Motor Coaches(2)	4,906
School Bus Chassis	19,963
Trucks with Cab-Over-Engine	22,370
Trucks with Diesel Engines	13,903
Trucks with 6 Wheels, 3 Axles	15,719
Multi-Stop Trucks	21,681
Ambulances and Funeral Vehicles	2,971
1949	
Station Wagons(1)	104,613
Motor Coaches(2)	5,511
School Bus Chassis	13,896
Trucks with Cab-Over-Engine	13,325
Trucks with Diesel Engines	6,047
Trucks with 6 Wheels, 3 Axles	4,122
Multi-Stop Trucks	19,479
Ambulances and Funeral Vehicles	2,853

(1)—Includes those built on both passenger and truck chassis. (2)—Does not include non-integral school buses. *—Automobile Manufacturers Association.

OPERATING DATA

INDEXES OF TONS TRANSPORTED IN INTERCITY SERVICE*

By Class I Intercity Motor Carriers of Property

(Index Base, Year 1941 = 100)

Region	1953[2]	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942
New England	174	163	161	156	127	130	127	124	114	115	118	113
Middle Atlantic	244	223	225	210	168	164	142	123	113	117	114	108
Central	260	231	239	231	166	161	138	113	101	104	108	96
Southern	307	286	262	240	190	169	140	123	127	131	130	112
Northwestern	351	326	328	301	258	254	221	190	164	156	148	120
Midwestern	327	308	308	290	246	224	185	153	141	137	138	122
Southwestern	396	376	366	310	246	231	194	158	148	144	145	114
Rocky Mountain	443	394	341	290	248	230	197	149	138	149	150	136
Pacific	307	295	281	237	179	176	166	150	143	139	131	112
Total—United States	270	247	246	228	178	171	149	128	118	119	119	107

*—Compiled by the American Trucking Associations, Inc.
1—Covers Common and Contract Carriers. Under ICC's revised definition Class I Carriers are those having annual gross revenues of $200,000 or more as compared to the former minimum of $100,000 or more. 2—Preliminary data.

COMPARISON OF INTERCITY TRUCK TONNAGE, 1953-1952*

By Commodity Classes—Includes Common and Contract Carriers

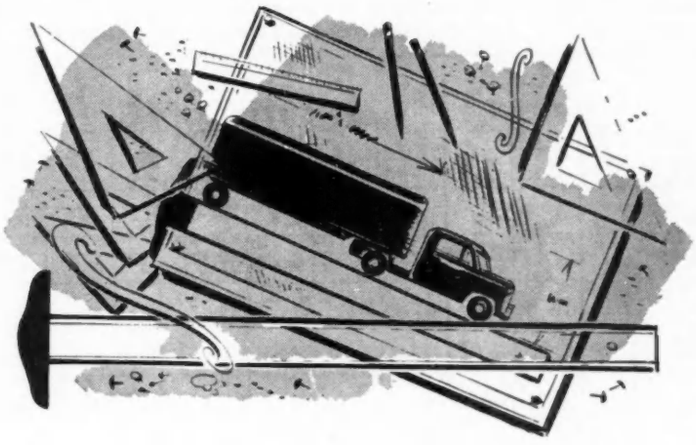
Commodity Class	Number of Carriers	Tonnage Carried: Tons 1953	Tons 1952	% of U. S. Total 1953	% of U. S. Total 1952	% Change 1953 from 1952
General Freight	843	111,100,222	101,512,087	51.3	51.3	0
Household Goods	37	787,947	764,470	.4	.4	0
Heavy Machinery	41	2,523,172	2,321,215	1.2	1.2	0
Liquid Petroleum	112	49,891,784	46,422,745	23.4	23.1	+3
Refrigerated Liquids	13	1,341,433	1,327,215	.6	.7	−1
Refrigerated Solids	27	1,446,741	1,441,207	.7	.7	0
Agricultural Commodities	26	3,007,923	2,982,517	1.4	1.5	−1
Motor Vehicles	69	8,961,112	6,831,670	4.1	3.4	+7
Building Materials	27	5,492,585	5,752,596	2.5	2.9	−4
All Other	262	31,901,029	28,712,257	14.7	14.5	+2
Total—All Classes	1,457	216,453,948	198,067,980	100.0	100.0	

*—Compiled by the American Trucking Associations, Inc. It by no means represents TOTAL tonnage.

U. S. GOVERNMENT FLEET OPERATING FACTS

		All Automobiles	Station Wagons	Ambulances	Buses for Eleven or More Passengers	Carry-All Suburbans	TRUCKS—GROSS VEHICLE WEIGHT: 12,499 (1 Ton and Under)	12,500 to 14,999 (1½ Ton)	12,500 to 16,999 (2-2½ Ton)	17,000 to 24,999 (3-4 Ton)	24,500 and Over (Over 4 Ton)	Total
No. of Vehicles (1)	Civilian	21,524	2,182	458	1,254	7,151	44,113	9,220	5,257	3,240	2,135	96,534
	Military	20,620	1,908	3,723	7,901	8,141	59,655	21,552	23,991	1,612	15,157	164,260
	Total	42,144	4,090	4,181	9,155	15,292	103,768	30,772	29,248	4,852	17,292	260,794
Average Miles per Vehicle per Year (1,3)	Low	1,101	2,747	352	947	1,583	353	835	424	2,097	1,512	
	High	14,229	15,040	8,796	21,743	16,709	11,877	7,182	18,435	24,100	14,619	
	Average	11,312	8,486	4,140	10,941	10,123	8,730	5,328	6,803	10,302	7,962	9,013
Average Miles per Gallon of Fuel (1)	Low (3)	6.5	7.7	4.5	3.4	11.0	6.9	4.3	3.4	3.0	3.0	
	High (3)	16.0	16.1	12.1	8.8	15.8	13.2	11.6	13.9	12.9	8.4	
	Average (3)	14.5	12.7	9.9	5.8	13.9	9.6	6.0	6.3	5.1	3.9	
	Military	16.8	14.0	9.9	6.2	13.5	9.6	7.8	5.7	6.9	4.3	
	Total Average	15.5	13.5	9.9	6.1	13.7	9.6	7.1	5.9	5.5	4.2	
Total Cost per Mile (1,4)	Low (3)	.0284	.0292	.0594	.0719	.0255	.0343	.0444	.0412	.0750	.0723	
	High (3)	.2499	.1260	.3552	.1936	.0653	.1312	.2714	.3043	.3039	.3193	
	Average (3)	.0385	.0564	.0993	.1094	.0412	.0649	.1293	.1150	.1725	.1725	
	Military	.0420	.0504	.0865	.1015	.0415	.0540	.0788	.1267	.0940	.0940	
	Total Average	.0402	.0535	.0878	.1028	.0413	.0596	.0958	.1231	.1509	.1509	
Operation Cost per Mile (1)	Low (3)	.0143	.0161	.0300	.0326	.0145	.0168	.0171	.0129	.0456	.0432	
	High (3)	.1030	.0485	.0948	.1671	.0430	.0862	.0919	.0968	.1993	.1831	
	Average (3)	.0243	.0290	.0515	.0556	.0269	.0379	.0720	.0646	.0925	.1322	
	Military	.0183	.0177	.0294	.0375	.0188	.0211	.0302	.0451	.0430	.0567	
	Total Average	.0214	.0235	.0317	.0405	.0235	.0297	.0444	.0511	.0789	.0749	
Maintenance Cost per Mile (1)	Low (3)	.0068	.0028	.0014	.0053	.0034	.0098	.0165	.0111	.0014	.0289	
	High (3)	.1594	.0799	.2603	.0929	.0291	.1678	.2395	.2782	.1052	.1244	
	Average (3)	.0142	.0273	.0478	.0538	.0270	.0270	.0572	.0503	.0800	.1126	
	Military	.0237	.0326	.0570	.0639	.0328	.0328	.0485	.0815	.0509	.0799	
	Total Average	.0187	.0299	.0560	.0622	.0298	.0298	.0514	.0719	.0720	.0879	
Accumulated Mileage per Vehicle Disposed of (1,3,5)	Low	13,071	48,633	33,637	34,799	20,149	14,779	26,065	2,857	23,202	14,760	
	High	89,570	87,048	67,633	143,277	84,511	93,062	66,395	107,853	113,974	200,860	
	Average (2)	67,984	56,311	48,054	79,257	61,914	55,407	49,732	45,607	41,792	44,719	
Number of Vehicles Disposed of (1,3)		3,014	376	56	150	422	3,183	2,019	225	198	115	9,758

(1) As of June 30, 1953. (2) Does not include vehicles disposed of by agencies not reporting mileages of vehicles disposed of. (3) Does not include military vehicles. (4) Includes operation and maintenance costs. (5) Does not include Soldiers Home or Post Office Department vehicles.



SECTION 3

SELECTION & OPERATION

State Size and Weight Limits..... 124
Safety Equipment Required 127
Transmission Ratios 130
Transportation Engineering Formulas..... 132
Third Axle Specifications 134
Tire and Rim Data..... 140
Braking Data 142
Fleet Operators Film List..... 144
Maintenance Manuals Listing 146
Bus Specifications 148
Truck Specifications 151
Fan Belt Specifications 166

1954 COMMERCIAL CAR JOURNAL'S FLEET OPERATORS' REFERENCE ANNUAL

STATE, SIZE and WEIG

STATE	SIZE RESTRICTIONS							GROSS WEIGHT (LEGAL LIMITS)		(See Boxed NOTE) PRACTICAL GROSS WEIGHT LIMITS (In thousands of pounds) Below Limits Apply to Pneumatic Tires Unless Otherwise Specified												
	Width (Inches)	Height (Feet)	LENGTH: Single Unit	LENGTH: Tractor Semi-Trailer	LENGTH: Other Combinations	Number of Trailers (Semi-Trailer = ½)	Minimum Tandem Axle Spacing	Pounds Per Inch of Tire Width	Per Axle (1000 lb.)	4-Wheel Single Unit	6-Wheel Single Unit	4-Wh. Tractor 2-Wh. Semi-Tr.	4-Wh. Tractor 4-Wh. Semi-Tr.	6-Wh. Tractor 4-Wh. Semi-Tr.	4-Wh. Truck 4-Wh. Trailer	4-Wh. Truck 6-Wh. Trailer	6-Wh. Truck 4-Wh. Trailer	6-Wh. Truck 6-Wh. Trailer	4-Wh. Tractor 2-Wh. Semi-Tr. 4-Wh. Trailer	4-Wh. Tractor 4-Wh. Semi-Tr. 4-Wh. Trailer	6-Wh. Tractor 4-Wh. Semi-Tr. 6-Wh. Trailer
TVX Ala.	96	m 12½	35k	45	NP	½	NS	600	18	36	*46.9	*53.9	*53.9	*53.9	NP	NP	NP	NP	NP	NP	NP
X Ariz.	102	13½	40	65	65	1½	40	NS	18	36	50	54	68	76.8	72	76.8	76.8	76.8	76.8	76.8	76.8
V Ark.	96	m 12½	35k	50	50	1 or ½	40	NS	18	18b	32b	36b	50b	56b	54b	56b	56b	56b	NP	NP	NP
X Cal.	96d	13½	35ak	60	60	NR	NS	NS-P 600-S	18	36	50	54	68	76.8	72	76.8	76.8	76.8	76.8	76.8	76.8
X Colo.	96	12½	35ak	60	60	2	40	500	18-I 16-J	30	46	*54	*72	*73.6	72	*73.6	*73.6	*73.6	*73.6	*73.6	*73.6
T Conn.	102	12½	45	45	NP	½	NS	NS-P 800-S	22.4	32	50	50	60	60	NP	NP	NP	NP	NP	NP	NP
X Del.	96	m 12½	35k	50	60	1½	48	700	20	26	40c	48c	60c	60c	60c	60c	60c	60c	60c	60c	60c
XV D. C.	96	12½	35	50	50	1 or ½	40	NS	22	44	60	65.4	65.4	65.4	65.4	65.4	65.4	65.4	NP	NP	NP
X Fla.	96	m 12½	40a	50	50	1 or ½	40	550	20	40	60	60	64.6	64.6	64.6	64.6	64.6	64.6	NP	NP	NP
X Ga.	96	13½	35k	45	45	1 or ½	40	NR	18-I 18-J	36	*46.9	*53.9	*53.9	*53.9	53.9	*53.9	*53.9	*53.9	NP	NP	NP
X Idaho	96	14	35g	60	65	1½	NS	800	18	36	50	54	68	72	72	72	72	72	72	72	72
Z Illinois	96	13½	42	45	45	1½	40	800	18	36	41	45	59	63	63	72	72	72	72	72	72
Indiana	96	m 12½	36k	50	50	1½	40	800	18	36	50	54	68	72	72	72	72	72	72	72	72
TX Iowa	96	m 12½	35ak	45	NP	½	40	NR	18	36	50	54	65.4	65.4	NP	NP	NP	NP	NP	NP	NP
X Kansas	96	12½	35ak	50	50	1 or ½	40	NR	18-I 16-J	36	50	54	63.8	63.8	63.8	63.8	63.8	63.8	NP	NP	NP
ZT Ky.	96	12½	35	45	NP	½	42	600	18	36	42	42	42	42	NP	NP	NP	NP	NP	NP	NP
La.	96	m 12½	35ak	50	60	1 or ½	40	NR	18-I 16-J	18b	32b	36b	50b	64b	54b	NP	68b	68b	NP	NP	NP
X Maine	96	12½	45	45	45	1 or ½	48	600	22-G	32	50	50	50	50	50	50	50	50	NP	NP	NP
X Md.	96	m 12½	55	55	55	NR	NS	NS	22.4	44.8	62.4	65	65	65	65	65	65	65	65	65	65
T Mass.	96	NR	35u	45	NS	1 or ½	NS	800	22.4	36	50	50	50	50	39	39	53	53	NP	NP	NP
p Mich.	96	m 12½	35k	50	50	1½	42	700	18-P 16-S	36-W	50-W	54-W	68-W	76-W	72-W	86-W	86-W	94-W	104-W	104-W	120-W
X Minn.	96	12½	40	45	45	1 or ½	40	NR	18-P 10.8-S	36	46	54	64	66.5	66.5	66.5	66.5	66.5	NP	NP	NP
X Miss.	96	m 12½	35ak	45	45	1 or ½	40	Table	18-I 16-J	27	37.6	45	52.6	52.6	52.6	52.6	52.6	52.6	NP	NP	NP
X Mo.	96	12½	35ak	45	45	NR	40	600	18-I 16-J	36	50	54	60	60	60	60	60	60	60	60	60
X Mont.	96	13½	35k	60	60	1 or ½	40	NS	18	36	50	54	68	76.8	72	76.8	76.8	76.8	NP	NP	NP
X Neb.	96	12½	35ak	50	50	1 or ½	40	NR	18	36	50	54	64.6	64.6	64.6	64.6	64.6	64.6	NP	NP	NP
X Nev.	96	NR	NR	NR	NR	NR	42	600	18	36	50	54	68	76.8	72	76.8	76.8	76.8	76.8	76.8	76.8
Z N. H.	96	13½	35u	45	45	NR	48	NS	22	30	40	50	50	50	50	50	50	50	50	50	50
N. J.	96	13½	35	45	50	1 or ½	40	Table	22.4h	30	40	60	60	60	60	60	60	60	NP	NP	NP
VX N. M.	96	12½	40	65	65	1 or ½	40	600	18	36	50	54	68	76.8	72	76.8	76.8	76 8	NP	NP	NP
X N. Y.	96	13	35	50	50	1 or ½	46	800-P 640-S	22.4	36	44	58.4	*61.5	*61.5	*61.5	*61.5	*61.5	*61.5	NP	NP	NP
Z N. C.	m 96	12½	35ak	48	48	1 or ½	48	600	19-I 17-J	L 31.5n	L 46.2n	46.2n	58.8n	58.8n	58.8n	58.8n	58.8n	58.8n	NP	NP	NP
X N. D.	96	12½	35ak	45	45	1 or ½	40	550	18	36	48	54	*57.7	*57.7	*57.7	*57.7	*57.7	*57.7	NP	NP	NP
X Ohio	*96	m 12½	35ak	45	60	NR	NS	650	19	38	50.5	57	*67.6	*67.6	76	78	78	78	78	78	78

STATE	SIZE		
	Width (Inches)	Height (Feet)	Single Unit
X Okla.	96	13½	35
VX Ore.	96	12½	35
Pa.	96	m 12½	35
R. I.	102	12½	40
X S. C.	96	12½	40
X S. D.	96	13	35
TX Tenn.	96	12½	3
X Tex.	96	13½	3
X Utah	96	14	4
Vt.	96	12½	5
VZ Va.	96	m 12½	3
X Wash.	96	12½	
X W. Va.	96	m 12½	
VX Wisc.	96d	m 12½	
X Wyo.	96	13	

a—Vehicles over 35 must have 3 axles ex in Fla. and S. C.
b—Plus weight on fro motor vehicle.
c—With power brakes.
d—104 inches for ur
g—Director of Highwa low 3-axle buses designated highways.
h—Applies to vehicles after March 1, 1 hicles registered or for purchase by re or before March 1, not subject to thes ha until March 31
i—Buses permitted 40 on designated highw in Del.; 45 ft. in
m—Automobile trans lowed 13½ ft. heig
n—Including tolerance
o—Graduated to tire
p—26,000 lbs. on t 3 ft. 6 in. ape June 1 to February with season.
s—Permits may be 60 ft. length.
t—Permits may be 55 ft. length.
u—Buses with 3 axl 40 ft. on designa subject to 18,000
Table—Axle weights tire widths.
NP—Not permitted.
NR—No restriction.
NS—Not specified.
P—Pneumatic tires.
S—Solid tires.
C—Permissible on highways.
D—Permissible on highways.
G—Axles less than limited to 16,000
H—Maximum show tire, permissible depends on chass

WEIGHT LIMITS

SELECTION & OPERATION

STATE	SIZE RESTRICTIONS: Width (Inches)	Height (Feet)	LENGTH: Single Unit	LENGTH: Tractor Semi-Trailer	LENGTH: Other Combinations	Number of Trailers (Semi-Trailer = ½)	Minimum Tandem Axle Spacing	GROSS WEIGHT (LEGAL LIMITS): Pounds Per Inch of Tire Width	GROSS WEIGHT (LEGAL LIMITS): Per Axle (1000 lb.)	PRACTICAL GROSS WEIGHT LIMITS (See Boxed NOTE) (In thousands of pounds) Below Limits Apply to Pneumatic Tires Unless Otherwise Specified: 4-Wheel Single Unit	6-Wheel Single Unit	4-Wh. Tractor 2-Wh. Semi-Tr.	4-Wh. Tractor 4-Wh. Semi-T.	6-Wh. Tractor 4-Wh. Semi-T.	4-Wh. Truck 4-Wh. Trailer	4-Wh. Truck 6-Wh. Trailer	6-Wh. Truck 4-Wh. Trailer	6-Wh. Truck 6-Wh. Trailer	4-Wh. Tractor 2-Wh. Semi-T. 4-Wh. Trailer	4-Wh. Tractor 4-Wh. Semi-T. 4-Wh. Trailer	6-Wh. Tractor 4-Wh. Semi-T. 6-Wh. Trailer
X Okla.	96	13½	35k	50	50	1 or ½	40	650	18	36	50	54	60	60	60	60	60	60	NP	NP	NP
VX Ore.	96	12½	35	50t	50s	1 or ½	40	550	18	36	50	54	60	60	60	60	60	60	NP	NP	NP
Pa.	96	m 12½	35ak	45	50	1 or ½	36	800	20	H 30	H 40	H 45	H 45	H 45	H 56	H 62	H 62	H 62	NP	NP	NP
R. I.	102	12½	40	50	50	1 or ½	40	800	22.4	36	44	50	50	50	64	72	72	60	NP	NP	NP
X S. C.	96	12½	40a	50	50	1 or ½	40	NR	20-I 16-J	40	52	60	68.3	68.3	68.3	68.3	68.3	68.3	NP	NP	NP
X S. D.	96	13	35ak	50	50	1 or ½	40	600	18-I 16-J	36	50	54	64.6	64.6	64.6	64.6	64.6	64.6	NP	NP	NP
TX Tenn.	96	12½	35k	45	45	1 or ½	40	NS	18	36	50	54	55.9	55.9	39.5	39.5	53.5	53.5	NP	NP	NP
X Tex.	96	13½	35k	45	45	1 or ½	40	650-I 600-J	18-I 16-J	36	50	54	58.4	58.4	58.4	58.4	58.4	58.4	NP	NP	NP
X Utah	96	14	45	60	60	2	40	NS	18-P 13.5-S	36	51	54	69	79.9	72	79.9	79.9	79.9	79.9	79.9	79.9
Vt.	96	12½	50	50	50	1 or ½	40	600	NR	30	40	50	50	50	50	50	50	50	NP	NP	NP
VZ Va.	96	m 12½	35k	45	45	1 or ½	40	650	18	24	40	40	50	50	50	50	50	50	NP	NP	NP
X Wash.	96	12½	35g	60	60	1 or ½	42	500	18	28	36	46	60	68	60	60	68	72	NP	NP	NP
X W. Va.	96	m 12½	35ak	45	45	1 or ½	40	NR	18	36	50	54	60.8	60.8	60.8	60.8	60.8	60.8	NP	NP	NP
VX Wisc.	96d	m 12½	35k	50	50	1 or ½	40	600	18-C 12-D	36-C	48-C	54-C	66-C	68-C	68-C	68-C	68-C	68-C	NP	NP	NP
X Wyo.	96	13	40	60	60	1 or ½	40	NS	18	36	50	54	68	73.9	72	73.9	73.9	73.9	NP	NP	NP

a—Vehicles over 35 ft. length must have 3 axles except buses in Fla. and S. C.
b—Plus weight on front axle of motor vehicle.
c—With power brakes.
d—104 inches for urban buses.
e—Director of Highways may allow 3-axle buses 40 ft. on designated highways.
h—Applies to vehicles registered after March 1, 1950. Vehicles registered or contracted for purchase by residents on or before March 1, 1950, are not subject to these axle limits until March 31, 1955.
k—Buses permitted 40 ft.; in Va. on designated highways; 42 ft. in Del.; 45 ft. in Okla.
m—Automobile transporters allowed 13½ ft. height.
n—Including tolerance.
o—Graduated to tire width.
p—26,000 lbs. on tandem axles 3 ft. 6 in. apart; applies June 1 to February 28; differs with season.
s—Permits may be granted for 60 ft. length.
t—Permits may be granted for 55 ft. length.
u—Buses with 3 axles permitted 40 ft. on designated highways subject to 18,000 lbs. per axle.
Table—Axle weights based upon tire widths.
NP—Not permitted.
NR—No restriction.
NS—Not specified.
P—Pneumatic tires.
S—Solid tires.
C—Permissible on "Class A" highways.
D—Permissible on "Class B" highways.
G—Axles less than 10 ft. apart limited to 16,000 lbs. per axle.
H—Maximum shown. In practice, permissible gross weight depends on chassis weight.

NOTE ON "W" AND ASTERISK

Except when shown by asterisk or when followed by the letter "W," the above gross weight limits are the limits fixed by state law.

When shown by asterisk the above limits are computations made by the National Highway Users Conference to show what it considers to be practical gross weights where gross weights are arrived at by application of one of the formulae shown below under Footnote "X." In making these computations, wheel base was arrived at by deducting 8 ft. total over-hang front and rear from permissible overall length of unit or combination; tandem axles were considered to be a minimum permissible distance apart. When actual over-hang is less than 8 ft. additional gross weight will be possible.

When followed by the letter "W," the limits shown are maximum possible weights where gross weight is determined by permissible axle weight. These limits are possible only when each axle carries a gross weight equal to the permissible axle limit as shown.

I—Permissible on balloon tires.
J—Permissible on other than balloon tires.
L—2-axle buses permitted 23,625 lbs. maximum net weight; 3-axle bus, 31,500 lbs.
T—With the following exceptions full trailers are permitted the same gross weight as other single units:—
Ala., Conn., Iowa, Ky.—Full trailers prohibited.
Mass.—Trailer and load limited to 3,000 lbs.
Tenn.—Trailer and load limited to 3,500 lbs.
V—Solid tires prohibited.
X—States where gross weight is determined by formula or by table of axle spacing. (See State under "Bridge Formulae" below or formula computations on next page.)
Z—See "Restrictions Peculiar to Certain States."

BRIDGE FORMULAE

Ala.—700 (L plus 40) when axles are over 18 ft. apart, otherwise 650 (L plus 40).

Ariz.—Gross weights graduated from 32,000 lbs. if axle spacing is 4 ft. to 76,800 lbs. if spacing is 56 ft. or more.

Calif.—Gross weights graduated from 32,000 lbs. if axle spacing is 4 feet to 76,800 lbs. if spacing is 56 feet or more.

Colo.—800 (L plus 40).

Del.—Gross weights graduated from 36,000 lbs. if axle spacing is 4 feet to 60,000 lbs. if spacing is 39 feet or more.

D. C.—Gross weights graduated from 38,000 lbs. if axle spacing is 4 ft. to 65,400 lbs. if spacing is 46 ft. or more.

Fla.—Gross weights graduated from 32,000 lbs. if axle spacing is 4 feet to 64,650 lbs. if spacing is 45 feet.

Ga.—700 (L plus 40).

Idaho—Gross weights graduated from 30,500 lbs. if axle spacing is 3 feet to 72,000 lbs. if spacing is 56 feet or more.

Iowa—Gross weights graduated from 32,000 lbs. if axle spacing is 4 feet to 65,478 lbs. if spacing is 42 feet or more.

Kans.—Gross weight graduated from 32,000 lbs. if axle spacing is 4 feet to 63,890 lbs. if spacing is 44 feet.

Maine—Gross weights graduated from 32,000 lbs. if axle spacing is 4 feet to 50,000 lbs. if spacing is 27 feet or more.

Md.—850 (L plus 40) any unit or combination, provided gross weight of vehicle or combination is not over 65,000 lb.

Minn.—Gross weights graduated from 28,000 lbs. if axle spacing is 4 ft. to 66,500 lbs. if spacing is 42 ft. or more.

Miss.—Gross weights graduated from 28,650 lbs. if axle spacing is 4 ft. to 52,650 lbs. if spacing is 30 ft. or more.

Mo.—Gross weights graduated from 32,000 lbs. if axle spacing is 4 ft. to 60,010 lbs. if spacing is 39 ft. or more.

Mont.—Gross weights graduated from 32,000 lbs. if axle spacing is 4 feet to 76,800 lbs. if spacing is 57 feet or more.

Nebr.—Gross weights graduated from 32,000 lbs. if axle spacing is 4 feet to 64,650 lbs. if spacing is 45 feet or more.

Nev.—Gross weights graduated from 32,000 lbs. if axle spacing is 4 feet to 76,800 lbs. if spacing is 56 feet or more.

N. M.—Special ruling by State Highway Commission permits gross weights graduated from 32,000 lbs., if axle spacing is 4 feet; to 76,800 lbs. if spacing is 56 feet.

N. Y.—750 (L plus 40) three or more consecutive axles and any unit or combination.

N. Dak.—750 (L plus 40).

Ohio—800 (L plus 47½).

Okla.—Gross weights graduated from 32,000 lbs. if axle spacing is 4 feet to 60,000 lbs. if spacing is 39 feet or more.

Ore.—Gross weights graduated from 32,200 lbs. if axle spacing is 6 ft. to 76,000 lbs. if spacing is 55 feet or more, provided that no vehicle or combination shall exceed 60,000 lbs. except under permit.

S. C.—Gross weights graduated from 32,000 lbs. if axle spacing is 4 ft. to 68,350 lbs. if axle spacing is 50 ft. or more.

S. D.—Gross weights graduated from 32,000 lbs. if axle spacing is 4 feet to 64,650 lbs. if axle spacing is 45 ft. or more.

Tenn. — Gross weights graduated from 32,000 lbs. if axle spacing is 4 ft., to 55,980 lbs. if axle space is 37 ft. or more.

Texas—Gross weights graduated from 32,000 lbs. if axle spacing is 4 ft. to 58,420 lbs. if spacing is 41 ft.

Utah—Gross weights graduated from 33,000 lbs. if axle spacing is 4 feet to 79,990 lbs. if spacing is 54 feet or more.

Wash.—Gross weight graduated from 32,000 lbs. if axle spacing is 4 feet to 72,000 lbs. if axle spacing is 53 ft. or more.

W. Va.—Gross weights graduated from 32,000 lbs. if axle spacing is 4 ft. to 73,280 lbs. If spacing is 57 feet, provided that no vehicle shall exceed 60,800 lb. except by permit.

Wisc.—1,000 (L plus 26) or gross weights graduated from 32,000 lbs. if axle spacing is 6 ft. to 68,000 lbs. if spacing is 40 ft. or more.

Wyo.—Gross weight graduated from 32,000 lbs. if axle spacing is 4 feet to 73,950 lbs. if spacing is 57 feet.

GROSS WEIGHTS COMPUTED BY FORMULAE

Computation of Gross Weights according to formulae, based on distance (in feet) between first and last axles, for States identified by State Size & Weight Limits chart by Footnote "X." It should be remembered that the figures in each column represent only a mathematical extension and are governed by Legal Overall Length Limits for single units and combinations of particular states. Also, that formula computations are superseded in some instances by specific limits given in the chart.

"L" (See Note Below)	Alabama,[6] North Dakota[6] 650 (L + 40)	Alabama,[7] Georgia 700 (L + 40)	New York, North Dakota[7] 750 (L + 40)	Colorado 800 (L + 40)	Ohio 800 (L + 47½)	Maryland 850 (L + 40)	Wisconsin 1000 (L + 26)
10 ft.	32500 lb.	35000 lb.	37500 lb.	..... lb.	46000 lb.	42500 lb.	36000 lb.
11	33150	35700	38250	.....	46800	43350	37000
12	33800	36400	39000	.....	47600	44200	38000
13	34450	37100	39750	.....	48400	45050	39000
14	35100	37800	40500	43200	49200	45900	40000
15	35750	38500	41250	44000	50000	46750	41000
16	36400	39200	42000	44800	50800	47600	42000
17	37050	39900	42750	45600	51600	48450	43000
18	37700	40600	43500	46400	52400	49300	44000
19	38350	41300	44250	47200	53200	50150	45000
20	39000	42000	45000	48000	54000	51000	46000
21	39650	42700	45750	48800	54800	51850	47000
22	40300	43400	46500	49600	55600	52700	48000
23	40950	44100	47250	50400	56400	53550	49000
24	41600	44800	48000	51200	57200	54400	50000
25	42250	45500	48750	52000	58000	55250	51000
26	42900	46200	49500	52800	58800	56100	52000
27	43550	46900	50250	53600	59600	56950	53000
28	44200	47600	51000	54400	60400	57800	54000
29	44850	48300	51750	55200	61200	58650	55000
30	45500	49000	52500	56000	62000	59500	56000
31	46150	49700	53250	56800	62800	60350	57000
32	46800	50400	54000	57600	63600	61200	58000
33	47450	51100	54750	58400	64400	62050	59000
34	48100	51800	55500	59200	65200	62900	60000
35	48750	52500	56250	60000	66000	63750	61000
36	49400	53200	57000	60800	66800	64600	62000
37	50050	53900	57750	61600	67600	65450	63000
38	50700	54600	58500	62400	68400	66300	64000
39	51350	55300	59250	63200	69200	67150	65000
40	52000	56000	60000	64000	70000	68000	66000
41	52650	56700	60750	64800	70800	68850	67000
42	53300	57400	61500	65600	71600	69700	68000
43	53950	58100	62250	66400	72400	70550	69000
44	54600	58800	63000	67200	73200	71400	70000
45	55250	59500	63750	68000	74000	72250	71000
46	55900	60200	64500	68800	74800	73100	.....
47	56550	60900	65250	69600	75600	73950	.....
48	57200	61600	66000	70400	76400	74800	.....
49	57850	62300	66750	71200	77200	75650	.....
50	58500	63000	67500	72000	78000	76500	.....
51	59150	63700	68250	72800	.....	77350	.....
52	59800	64400	69000	73600	.....	78200	.....
53	60450	65100	69750	74400	.....	79050	.....
54	61100	65800	70500	75200	.....	79900	.....

"L"—Distance in feet between first and last axles of group of axles considered. [6]—Vehicles with axles spaced 18 feet or less. [7]—Vehicles with axles over 18 feet apart.

NATIONAL HIGHWAY USERS CONFERENCE, INC., National Press Bldg., Washington, D. C.

Corrected to March 15, 1954, Copyright 1954

RESTRICTIONS PECULIAR TO CERTAIN STATES

ILL.—Limits shown are permissible on designated highways; otherwise limited to 16,000 lbs. on any one axle. Two-axle truck limited to 32,000 lbs. under registration law.

KY.—Limits shown are permissible on designated highways; otherwise limits are: height 11½ ft.; length—truck 26½ ft.; length—semi-trailer combination 30 ft.; gross weight 18,000 lbs.

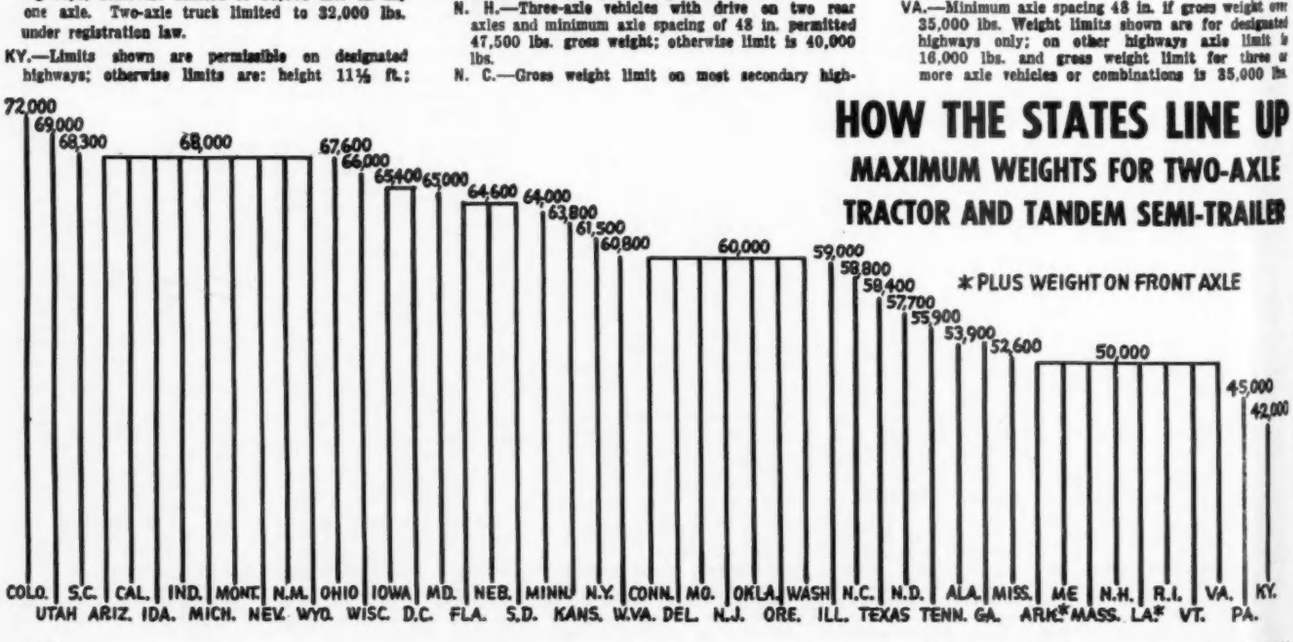
N. H.—Three-axle vehicles with drive on two rear axles and minimum axle spacing of 48 in. permitted 47,500 lbs. gross weight; otherwise limit is 40,000 lbs.

N. C.—Gross weight limit on most secondary highways 16,000 lbs. for two axles and 24,000 lbs. for 3 axles.

VA.—Minimum axle spacing 48 in. if gross weight over 35,000 lbs. Weight limits shown are for designated highways only; on other highways axle limit is 16,000 lbs. and gross weight limit for three or more axle vehicles or combinations is 35,000 lbs.

HOW THE STATES LINE UP

MAXIMUM WEIGHTS FOR TWO-AXLE TRACTOR AND TANDEM SEMI-TRAILER



Safety Equipment

Required & Permitted on Trucks, Truck-Tractors, Trailers & Buses

As Specified in I.C.C. Safety Rules & Regulations, State Motor Vehicle Laws & Official Rulings . . . and Compiled by National Highway Users Conference

TABULATION OF SAFETY REQUIREMENTS ON PAGES 128 & 129

EXPLANATION OF I.C.C. REFERENCES

‡—The I.C.C. Motor Carrier Safety Regulations apply to "Automotive Safety Equipment" on vehicles operated by common and contract carriers ("for hire" carriers) of persons or property and by private carriers of property, when operated regularly in interstate or foreign commerce, except when operated wholly within a municipality, between contiguous municipalities, or within a zone adjacent to and commercially a part of any such municipality or municipalities. When vehicles of common, contract or private carriers are transporting explosives or other dangerous articles the last-mentioned exception does not apply.

†—Requires "a device or other means of preventing or removing ice or frost" from windshield.

*—I.C.C. neither approves nor disapproves any individual required item. Its Motor Carrier Safety Regulations, however, set forth certain constructional details or performance standards to which certain items must conform. Reference should be made to the Motor Carrier Safety Rules for complete details.

COLOR AND REQUIREMENT SYMBOLS

A—Amber
G—Green
R—Red
N—No
NP—Not Permitted
NR—Not Required
NS—Not Specified
NSM—Not Specifically Mentioned
Y—Yes
Ye—Yellow
W—White
/—When used between two letters or numbers means "or."
Example—2/4 means "2 or 4."

GENERAL FOOTNOTES

a—Prohibits red light visible from in front of vehicle.

b—Prohibits red or green light visible from in front of vehicle.

c—Tail lamp or separate lamp shall illuminate rear license plate with white light.

d—Must be located and constructed so as to illuminate rear license plate with white light.

e—May be incorporated in tail lamp.

f—Semaphores required on school buses.

g—One or both may be incorporated in tail lamp or lamps.

h—Number plate must be illuminated with white light.

i—Also two yellow reflectors on front of truck 70 in. or more in width and bus over 7 passengers.

j—Also one amber reflector on front of vehicle.

k—One may be part of tail lamp.

m—Reflectors may be substituted.

n—Reflectors may be used when vehicle has acetylene lamps.

p—White, green or amber. Where green originally used, may be continued till replacements are necessary.

r—Yellow or orange flags required.

s—On vehicles over 45 feet long, rear clearance and marker lamps shall be in combination.

t—One green marker lamp every 10 feet on combinations over 33 feet long.

u—Vehicles manufactured after December 31, 1949, shall have double wipers.

y—Trailer and semi-trailers shall have one lamp on front visible from both sides.

z—Clearance and marker lamps may be in combination.

aa—Every vehicle 72 in. or more wide must have 2 amber, or clear front, and 2 amber, clear or red rear reflectors. Clearance lamps may be substituted. Reflectors must be approved. Clearance lamps need not be approved.

cc—Vehicles manufactured after January 1, 1943, shall have double wipers.

dd—On *interstate* buses—green lights adjacent to destination sign or near upper corners;
On *intrastate* buses—purple lights in same locations.

ee—Double wipers required on all school buses.

ff—Two yellow stop lamps required on all buses.

ii—Clearance and marker lamps may be in combination. When in combination there must be one such lamp on each side, midway of vehicle.

kk—Permits tinted other than red.

xx—Fog lamps are included within the term "Auxiliary Driving Lamps" and are treated accordingly.

Data Revised to March 15, 1954

SAFETY EQUIPMENT REQUIREMENTS (Cont.)

REFERENCES AND SYMBOLS EXPLAINED ON PRECEDING PAGE

SAFETY EQUIPMENT TO BE MOUNTED ON VEHICLES

Jurisdictional Control Over Equipment	HEAD LAMPS			TAIL LAMPS			STOP LAMPS			REAR REFLECTORS			CLEARANCE LAMPS				SIDEMARKER LAMPS				IDENTIFICATION LAMPS				DIRECTION SIGNALS				SIDE REFLECTORS			
														Color				Color				Color				Color				Color		
	Number	Color	Must Be Approved	Number	Color	Must Be Approved	Number	Color	Must Be Approved	Number	Color	Must Be Approved	Number	Front	Rear	Must Be Approved	Number	Front	Rear	Must Be Approved	Number (Sets)	Front	Rear	Must Be Approved	Number	Front	Rear	Must Be Approved	Number	Front	Rear	Must Be Approved
I.C.C.	2	NS	•	2	R	•	2/1	R/ye	•	2	R	•	2/4z	A	R	•	2/4z	A	R	•	NR	.....	.....		NR	.....	.....		2/4	A	R	•
Ala.	2	W/A	Y	1d	R	Y	1	R/ye	Y	2	R	N	4	W	R	N	NR	.....	.....		NR	.....	.....		NS	NS	R	Y	2	NS	R	N
Ariz.	2	W/A	Y	1c	R	Y	1	R/ye	Y	2	R	Y	4	A	R	Y	2/4	A	R	Y	NR	.....	.....		4	A	R	Y	2	A	R	Y
Ark.	2	NSb	Y	1c	R	Y	1	R/ye	Y	1e	R	Y	2	G	R	Y	4m	G	R	Y	3	A/G	R	Y	4	Ye	Ye/R	Y	4	G	R	Y
Calif.	2	W/A	Y	1c	R	Y	1e	A/R	Y	1/2k	R	Y	4	A	A/R	Y	NR	.....	.....		NR	.....	.....		4	A/W	A/R	Y	NR	.....	.....	
Colo.	2	W/A	Y	1c	R	Y	1e	R	Y	2k	R	Y	4	A	R	Y	4	A	R	Y	NR	.....	.....		4	Ye	R	Y	4	A	R	Y
Conn.	2	W/A/Ye	Y	1c	R	Y	1	Rff	Y	1/2k	A/RW	Y	4aa	A/W	A/RW	Y	NR	.....	.....		2	dd	NR	N	4	Ye/A	Ye/A/Rw	Y	4	A/W	W/RA	Y
Del.	2	W	Y	1d	R	Y	1	R	Y	NR	.....		4	A	R	Y	1	t	....	Y	NR	.....	.....		4	A	R	Y	NR	.....	.....	
D. of C.	2	NSa	Y	1c	R	Y	1e	R/ye	Y	2	R	Y	4	A	R	Y	4	A	R	Y	NR	.....	.....		4	W/A	R/A	Y	4	A	R	Y
Fla.	2	NSa	N	1c	R	N	1e	R/ye	Y	2	R	N	2/4z	A	R	N	2/4z	A	R	N	NR	.....	.....		NS	.....	R/Ye	Y	4	A	R	N
Ga.	2	NS	N	1c	R	N	1	A/R	N	2e	R	Y	2/4z	A	R	Y	2/4z	A	R	Y	NR	.....	.....		NS	NS	R		4	A	R	N
Idaho	2	NSa	Y	1c	R	Y	1e	A/Rye	Y	2g	R	Y	2/4z	A	R	Y	2/4z	A	R	Y	NR	.....	.....		NS	Ye	Ye/R	Y	4	A	R	Y
Ill.	2	Ye/AW	Y	1	R	Y	1	Ye/R	Y	1j	R	Y	3/6	G	R	Y	NS	NS	NS	N	3	.....	R	N	NS	A	Ye/R	Y	4	A	R	Y
Ind.	2	W	N	1c	R	N	1fe	R/Ye	N	2i	R	N	2/4	A	R	Y	2/4	A	R	Y	NR	.....	.....		4f	Ye	Ye/R	N	2/4	A	R	N
Iowa	2	Wkk	Y	1c	R	Y	1	Ye/R	Y	2k	R	Y	2/4	Ye/W/A	R	Y	2/4	Ye/AW	R	Y	3	Ye/AW	R	Y	4	W/A/Ye	R/A/Ye	Y	2/4	p	R	Y
Kan.	2	W	Y	1c	R	Y	1	Ye/R	Y	1e	R	Y	2	A	R	Y	4m	A	R	Y	3	A	R	Y	NR	Ye	Ye/R	Y	4	A	R	N
Ky.	2	Wkk	N	1n	R	N	1	Ye/R	N	1e	.....		2/4	G/W	R	N	NR	.....	.....		NR	.....	.....		NS	NS	Ye/R	N	NR	.....	.....	
La.	2	NSb	Y	1d	R	Y	1	R	Y	NR	.....		2	A	R	Y	4	A	NS	Y	NR	.....	.....		4	A	R	Y	NR	.....	.....	
Me.	2	W	Y	1c	R	Y	1	R/A	Y	1e	R	Y	2/3m	A/GW	R	Y	NR	.....	.....		NR	.....	.....		NS	.....	.....	Y	NR	.....	.....	
Md.	2	Wkk	Y	1c	R	Y	1	A/R	Y	1e	R	Y	4m	A	R	Y	4mz	A	R	Y	NR	.....	.....		4	A	A/R	Y	NR	.....	.....	
Mass.	2	Ye/AW	Y	1	R	Y	NR	.....		1	R	Y	2	G	R	N	NR	.....	.....		NR	.....	.....		NR	.....	.....		NR	.....	.....	
Mich.	2	W	N	1c	R	N	1	A/R	N	2	R	N	4z	A	R	N	4z	A	R	N	NR	.....	.....		NR	NS	R/A	N	2/4	A	R	N
Minn.	2	W	Y	1c	R	Y	1	Ye/R	Y	1e	R	Y	4ii	A/W	R	Y	4ii	A/W	R	Y	NR	.....	.....		4	Ye	Ye/R	Y	NR	.....	.....	
Miss.	2	W	Y	1c	R	Y	1	A/R	Y	2	R	Y	4	A	R	Y	4	A	R	Y	NR	.....	.....		4	A	A/R	Y	4	G	R	Y
Mo.	2	W	Y	1c	R	Y	1	NS	Y	2/4	R	Y	2/4	A	R	Y	2/4	A	R	N	NR	.....	.....		NS	NS	R	Y	2	A	R	N
Mont.	2	W	N	1d	R	N	NR	.....		2	R	N	4m	Ye/WG	R	N	NR	.....	.....		NR	.....	.....		NR	.....	.....		NR	.....	.....	
Nebr.	2	NSb	Y	1	R	Y	1	R	Y	1	R	N	2m	A/G	R	Y	NR	.....	.....		NR	.....	.....		NS	NS	R	Y	NR	.....	.....	
Nev.	2	Wkk	N	1	R	N	1e	Ye/RA	Y	2	R	N	2/4	A	R	N	2/4	A	R	N	NR	.....	.....		NR	.....	.....		2	A	R	N
N. H.	2	NSa	Y	1d	R	Y	1	NS	Y	2	R	Y	4s	A	R	Y	2s	A	R	Y	NR	.....	.....		NS	NS	NS	Y	4	A	R	Y
N. J.	2	Ye/AW	Y	2c	R	Y	2	R	Y	1/2k	R	Y	NR	.....	.....		NR	.....	.....		NR	.....	.....		4	Ye/A	Ye/A	Y	NR	.....	.....	
N. M.	2	NSa	Y	2c	R	Y	1e	Ye/R/A	Y	2	R	Y	2/4	A	R	Y	4z	A	R	Y	NR	.....	.....		4	A	R/A/Ye	Y	4	A	R	Y
N. Y.	2	Ye/W	Y	1h	R	Y	1	R	Y	1/2ik	R	Y	NR	.....	.....		NR	.....	.....		NR	.....	.....		4	W/A	R/A	Y	NR	.....	.....	
N. C.	2	NSb	Y	1d	R	Y	1	A/R	Y	1	R	Y	4	A	R	Y	NR	.....	.....		NR	.....	.....		4	NS	NS	Y	NR	.....	.....	
N. D.	2	NSb	Y	1	R	Y	1	R	Y	NR	.....		2	A	R	Y	NR	.....	.....		NR	.....	.....		NS	NS	R	Y	NR	.....	.....	
Ohio	2	W	Y	1c	R	N	1	Ye/R	Y	2	R	N	4	A	R	N	4	A	R	N	NR	.....	.....		NS	.....	.....	Y	4	A	R	N
Okla.	2	W	Y	2c	R	Y	1e	R/AYe	Y	2e	R	Y	4	A	R	Y	4	A	R	Y	NR	.....	.....		NS	Ye/A	A/R/Ye	Y	4	A	R	Y
Ore.	2	NSb	Y	1c	R	Y	1	Ye/R	Y	2k	R	Y	2/4	A	R	Y	2/4	A	R	Y	NR	.....	.....		2/4	A	R	Y	2/4	A	R	Y
Penna.	2	NSa	Y	1c	R	Y	1	Ye/R	Y	1	R	Y	2m	A	R	N	4m	A	R	N	3	A	R	N	2/4	Ye/A	Ye/R	Y	4	A	R	Y
R. I.	2	A/W	Y	1c	R	Y	1	Ye/R	Y	2	R	Y	2/4	A	R	Y	4	A	R	Y	NR	.....	.....		4	Ye/A	Ye/A	Y	4	A	R	Y
S. C.	2	W	N	1c	R	N	1	Ye/R	Y	1e	R	N	2/4z	A	R	N	2/4z	A	R	N	NR	.....	.....		4	A	Ye/R	Y	2/4	A	R	Y
S. D.	2	NSa	Y	1c	R	Y	1	Ye/R	Y	1e	R	Y	2	W	R	Y	NR	.....	.....		3	G	R	Y	4	A	Ye/R	Y	NR	.....	.....	
Tenn.	2	NSa	Y	1	R	Y	1	A/R	Y	2	R	N	4	A	R	Y	4	A	R	Y	NR	.....	.....		NR	.....	.....		4	A	R	Y
Tex.	2	W	Y	1d	R	N	1	Ye/R	Y	2	R	Y	2/4z	A	R	Y	2/4z	A	R	Y	NR	.....	.....		4	A	R/A/Ye	Y	2/4	A	R	Y
Utah	2	NSa	Y	1c	R	Y	1e	Ye/R	Y	2g	R	Y	4	A	R	N	4	A	R	N	NR	.....	.....		4	A	Ye/R	Y	4	A	R	Y
Vt.	2	W/A	Y	1d	R	Y	NR	.....		NR	.....		1	G	R	Y	NR	.....	.....		NR	.....	.....		NR	.....	.....		NR	.....	.....	
Va.	2	W	Y	1c	R	Y	1	R	Y	NR	.....		4	A	R	Y	NR	.....	.....		NR	.....	.....		4	A	A/R	Y	NR	.....	.....	
Wash.	2	NSa	Y	2c	R	Y	1e	R/Ye	Y	2e	R	Y	4	Ye	R	Y	2/4z	A	R	Y	NR	.....	.....		4	Ye	Ye/R/A	Y	4	Ye/A	R	Y
W. Va.	2	NSa	Y	1c	R	Y	1e	R/Ye	Y	2g	R	Y	2/4z	A	R	Y	2/4z	A	R	N	NR	.....	.....		NS	.....	R/A/Ye	Y	4	A	R	N
Wisc.	2	W	N	1m	A/R	N	1m	A/R	N	1	R	N	2/4	A	R	N	NR	.....	.....		NR	.....	.....		4	W/A	R/A	Y	4	A	R	N
Wyo.	2	NSa	Y	1d	R	Y	1	Ye	Y	1	R	Y	2m	G	R	Y	2m	G	NS	N	NR	.....	.....		4	Ye	Ye	Y	4	A	R	Y

REQUIRED → TO BE CARRIED IN VEHICLES | ← PERMITTED → TO BE MOUNTED

Jurisdictional Control Over Equipment	REAR VIEW MIRROR		WINDSHIELD WIPERS		DEFROSTERS		FIRE EXTINGUISHERS		LIQUID BURNING FLARES		ELECTRIC FLARES			REFLECTOR FLARES			FUSEES			RED CLOTH FLAGS		LIGHT OR FLAG ON PROJECTING LOAD		AUXILIARY DRIVING LAMPS			FOG LAMPS			SPOT LAMPS			Driving Lights Permitted Lit At One Time
	Number	Must Be Approved	Number	Must Be Approved	Number	Must Be Approved	Number	Must Be Approved	Number	Must Be Approved	Number	Color	Must Be Approved	Number	Color	Must Be Approved	Number	Color	Burning Time (Min.)	Number	Size (Square)	Light or Lantern	Flag Size (Sq.)	Number	Color	Must Be Approved	Number	Color	Must Be Approved	Number	Color	Must Be Approved	
I.C.C.	2	•	2	•	†	•	1/2	•	3	•	3	R	•	3	R	•	3	NS	15	2	12	1	12	NSM	.....	...	NSM	.....	...	NSM	.....	...	4
Ala.	1	N	1	N	NR	...	NR	...	3	Y	3	R	Y	3	R	Y	3	R	NS	2	12	1	12	2	NS	Y	2	NS	Y	1	NS	Y	NS
Ariz.	1	N	1	N	NR	...	1	Y	3	N	3	R	N	3	R	Y	3	R	15	2	12	1	12	2	NSa	Y	2	NS	Y	1	NSa	Y	4
Ark.	1	N	1	N	NR	...	NR	...	3	Y	3	R	Y	NS	M	...	NR	....	....	NR	....	1	16	3	NSa	Y	XX	.....	...	1	NSa	Y	4
Calif.	1	N	1u	N	1†	N	1	Y	2	N	2	R	N	2	R	Y	NR	....	....	NR	....	2	16	2	A/W	Y	2	A/W	Y	2	NS	Y	4
Colo.	1	N	1	N	1†	N	1	...	3	Y	3	R	Y	3	R	Y	3	R	20	3	NS	1	16	3	NS	Y	XX	.....	...	1	NS	Y	4
Conn.	1	N	1	N	1†	N	1	N	3n	Y	3n	R	Y	3n	R	Y	3n	R	NS	NR	....	1	NS	2	A/W	N	XX	.....	...	1	A/W	N	4
Del.	1	N	1	N	NR	...	NR	...	3	Y	3	R	Y	3	R	Y	NR	....	....	NR	....	1	12	2	W	Y	2	A	Y	2	W	Y	4
D. of C.	½	N	2	N	NR	...	1	N	NR	...	NR	...	...	NR	...	...	NR	....	....	NR	....	1	12	2	A/W	Y	2	A/W	Y	1	A/W	N	2
Fla.	1	N	1	N	1†	N	1	Y	3	Y	3	R	Y	3	R	...	3	R	15	2	12	1	16	3	NSa	N	NSM	.....	...	1	NSa	N	NS
Ga.	1	N	1	N	1†	N	1	Y	3	N	3	R	N	3	R	N	3	R	15	2	12	1	12	2	NS	N	2	NS	N	1	NSa	N	NS
Idaho	1	N	2	N	1†	N	1	Y	3	Y	3	R	Y	3	R	Y	3	R	NS	NR	....	1	16	2	NSa	Y	2	NSa	Y	1	NSa	Y	4
Ill.	1	N	1	N	NR	...	2	N	3	Y	3	R	Y	3	R	Y	NR	....	....	3	NS	1	16	3	NS	N	XX	.....	...	1	NS	N	4
Ind.	1	N	1	N	NR	...	NR	...	3	Y	3	R	Y	3	R	Y	3	R	15	2	12	1	16	3	NS	N	XX	.....	...	1	W	N	4
Iowa	1	N	1	N	NR	...	2	Y	3	Y	3	R	Y	3	R	Y	1	NS	NS	3	NS	1	16	3	NSa	N	XX	.....	...	1	NSa	N	4
Kan.	1	Y	1	N	1†	N	2	N	3	Y	3	R	Y	3	R	Y	3	R	15	3	15	1	12	3	A/W	Y	XX	.....	...	1	W	N	4
Ky.	1	N	1	N	NR	...	1	Y	3	Y	3	R	Y	3	R	Y	3	R	15	NR	....	1	NS	NSM	.....	...	NSM	.....	...	NSM	.....	...	NS
La.	1	N	1	...	NR	...	1	N	3	Y	3	R	Y	3	R	Y	NR	....	....	2	12	1	12	2	NSa	Y	XX	.....	...	P	rohibited		NS
Me.	1	N	1	N	1†	N	1	Y	3	N	3	R	N	3	R	N	NR	....	....	2	12	1	NS	2	A/W	Y	XX	.....	...	1	NS	N	NS
Md.	1	N	1	N	NR	...	2	Y	3	Y	3	R	Y	3	R	Y	NR	....	....	NR	....	1	16	3	NSa	Y	XX	.....	...	1	NSa	N	4
Mass.	1	N	1	N	NR	...	1	Y	3	Y	3	R	Y	3	R	Y	NR	....	....	NR	....	1	12	NSM	.....	...	NSM	.....	...	1	NSa	Y	NS
Mich.	1	N	1	N	1	N	1	N	3	Y	3	R	Y	3	R	Y	3	R	15	2	12	1	12	2	A/W	N	XX	.....	...	2	A/W	N	NS
Minn.	1	N	1	N	1†	N	1	Y	3	Y	3	R	Y	3	R	Y	NR	....	....	3r	24	1	12	4	A/W	Y	XX	.....	...	2	W	Y	4
Miss.	1	N	1	N	1†	N	1	Y	3	Y	3	R	Y	NSM	...	...	3	R	15	NR	....	1	16	2	NS	Y	XX	.....	...	1	NS	N	4
Mo.	1	N	1	N	1†	N	1	Y	3	Y	3	R	Y	3	R	Y	3	R	15	2	NS	1	16	3	Ye/AW	N	XX	.....	...	1	Ye/AW	N	4
Mont.	1	N	1	N	1†	N	1	Y	3	Y	3	R	Y	3	R	Y	NR	....	....	2	14	1	16	3	NSb	Y	XX	.....	...	1	NS	Y	NS
Nebr.	1	N	1	N	NR	...	1	N	3	Y	NR	...	...	3	R	Y	NR	....	....	2	NS	1	16	2	NSb	Y	NSM	.....	...	1	NSb	Y	NS
Nev.	1	N	1	N	1†	N	1	Y	3	Y	3	R	Y	NSM	...	...	3	R	15	2	12	1	12	3	NS	N	XX	.....	...	1	NS	N	4
N. H.	1	N	1	N	1	N	1	Y	2	Y	2	R	Y	2	R	Y	2	R	20	NR	....	1	12	3	NS	Y	2	A	Y	2	NS	Y	4
N. J.	1	N	1	N	NR	...	1	Y	3	Y	3	R	Y	3	R	Y	NR	....	....	NR	....	1	12	2	A/W	Y	XX	.....	...	1	NSa	Y	4
N. M.	1	N	1	N	1†	N	1	Y	3	Y	3	R	Y	3	R	Y	3	R	15	2	12	1	12	2	NSa	Y	2	NSa	Y	2	NSa	Y	4
N. Y.	1	N	1	N	1†	N	1	Y	2	Y	2	R	Y	2	R	Y	NR	....	....	NR	....	1	NS	NSM	.....	...	NSM	.....	...	NSM	.....	...	NS
N. C.	1	N	1	Y	NR	...	2	Y	2	N	2	R	N	NP	...	...	2	R	NS	2	12	1	12	2	NS	N	XX	.....	...	2	NS	Y	NS
N. D.	1	N	1	N	NR	...	1	N	3	Y	3	R	Y	3	R	Y	NR	....	....	3	12	1	12	2	NS	Y	XX	.....	...	2	NS	Y	2 *
Ohio	1	N	1	N	NR	...	2	Y	3	Y	3	R	Y	NP	...	...	3	R	15	2	12	1	16	3	W	N	NS	Ye/AW	N	1	W	N	5
Okla.	1	N	1	N	1†	N	1	Y	3	Y	3	R	Y	3	R	Y	3	R	15	3	12	1	12	2	NSa	Y	XX	.....	...	2	NSa	Y	4
Ore.	1	N	1	N	NR	...	1	Y	3	N	3	R	N	3	R	Y	NR	....	....	3	12	1	12	3	NSa	Y	XX	.....	...	1	NS	Y	4
Penna.	1	N	1	N	NR	...	1	N	3	Y	3	R	Y	3	R	Y	NR	....	....	3	12	1	12	3	W	Y	2	A/W	Y	1	NS	N	4
R. I.	1	N	1ee	N	1†	N	1	Y	3	Y	3	R	Y	3	R	Y	3	R	15	2	12	1	12	2	A/W	Y	XX	.....	...	2	NS	Y	4
S. C.	1	N	1	N	1†	N	2	Y	3	Y	3	R	Y	3	R	Y	3	R	15	3	12	1	12	2	NS	Y	2	NS	Y	1	NS	N	4
S. D.	1	N	NR	...	1†	N	1	N	3	Y	3	R	Y	3	R	Y	NR	....	....	NR	....	1	12	3	NS	Y	XX	.....	...	1	NS	N	NS
Tenn.	1	N	1	N	1†	N	1	Y	3	Y	3	R	Y	3	R	Y	3	R	15	2	12	1	12	2	NS	N	XX	.....	...	2	NSa	N	4
Tex.	1	N	NR	...	1†	N	2	Y	3	Y	3	R	Y	3	R	Y	3	R	15	2	12	1	12	3	NS	N	XX	.....	...	1	NS	N	4
Utah	1	N	1	N	1†	N	1	Y	3	Y	3	R	Y	3	R	Y	3	R	15	2	12	1	12	2	NSa	Y	2	NSa	Y	1	NSa	N	4
Vt.	1	N	1	N	NR	...	1	Y	3	Y	3	R	Y	3	R	Y	NR	....	....	2	12	1	12	2	NS	Y	2	NS	Y	2	NS	Y	NS
Va.	1	Y	1cc	Y	NR	...	1	Y	3	Y	3	R	Y	3	R	Y	NR	....	....	2	12	1	12	NSM	.....	...	1	A/W	Y	1	W	Y	4
Wash.	1	N	2	N	NR	...	1	Y	3	Y	3	R	Y	3	R	Y	NR	....	....	2	12	1	12	2	NSa	Y	XX	.....	Y	1	W	N	4
W. Va.	1	N	1	N	1†	N	1	Y	3	Y	3	R	Y	3	R	Y	3	R	15	2	12	1	12	2	NSa	Y	2	NSa	Y	1	NS	Y	4
Wisc.	1	N	1	N	NR	...	1	Y	3	Y	3	R	Y	NP	...	...	3	R	20	NR	....	1	12	2	NSa	Y	NS	NSa	Y	2	W	Y	4
Wyo.	1	N	1	N	1†	N	1	Y	3	Y	3	R	Y	3	R	Y	NR	....	....	NR	....	NR	....	2	NSa	Y	XX	.....	...	2	NSa	Y	NS

TRANSMISSION RATIOS

TRANSMISSIONS MAKE AND MODEL	No. of Forward Speeds	Direct Drive on	GEAR RATIOS							Power Take-off, Opening
			Low	Second	Third	Fourth	Fifth	Reverse	High Reverse	
AUTOCAR										
DF-4	4	4	5.78	3.52	1.83	1.00	.....	7.23	.....	R-L
DF-5	5	4	5.78	3.52	1.83	1.00	.72	7.23	.....	R-L
TF-4	4	4	5.90	3.60	1.84	1.00	.....	7.37	.....	R-L
TF-5	5	4	5.90	3.60	1.84	1.00	.75	7.37	.....	R-L
BH-31 Aux.	3	2	1.33	1.00	.85	.....	.....	.....	.....	R
BH-21 Aux.	2	2	1.47	1.00	.....	.....	.....	.....	.....	R
BROWN-LIPE (1)										
*5331	3	3	3.80	1.91	1.00	.....	.....	4.24	.....	
3541	4	4	4.57	2.42	1.73	1.00	.....	4.07	.....	
3152	5	5	7.55	4.18	2.45	1.45	1.00	7.36	.....	L
3153	5	4	6.00	3.32	1.94	1.00	.793	5.84	.....	L
6241	4	4	6.63	3.19	1.70	1.00	.....	7.53	.....	R-L
6241-A	4	4	7.15	3.44	1.83	1.00	.....	8.13	.....	R-L
6241-B	4	4	4.32	2.67	1.67	1.00	.....	4.90	.....	R-L
6241-C	4	4	3.90	2.42	1.50	1.00	.....	4.43	.....	R-L
8440	4	3	3.90	1.88	1.00	.754	.....	4.43	.....	R-L
8041	4	4	6.25	3.47	1.75	1.00	.....	6.39	.....	R-L
8045	4	4	6.25	3.47	1.75	1.00	.....	6.39	.....	R-L
8241, 8245	4	4	5.19	2.88	1.72	1.00	.....	5.31	.....	R-L
8440, 8445	4	3	3.67	1.85	1.00	.77	.....	3.75	.....	R-L
8440-A / 8445-A	4	3	3.67	1.85	1.00	.67	.....	3.75	.....	R-L
*4852	5	5	7.40	4.00	2.47	1.46	1.00	7.84	.....	R-L
*4852-A	5	5	7.40	4.27	2.47	1.46	1.00	7.84	.....	R-L
*4752	5	5	6.10	3.30	1.81	1.35	1.00	6.46	.....	R-L
*4753	5	4	6.10	3.30	1.81	1.00	.77	6.46	.....	R-L
*4753-A	5	4	6.10	3.30	1.81	1.00	.88	6.46	.....	R-L
*4852	5	5	5.08	2.93	1.79	1.34	1.00	5.37	.....	R-L
*4853	5	4	5.08	2.93	1.69	1.00	.78	5.37	.....	R-L
*6352	5	5	7.31	4.09	2.41	1.44	1.00	7.33	.....	R-L
*6452	5	5	6.07	3.40	1.79	1.34	1.00	6.09	.....	R-L
*6453	5	4	6.07	3.40	1.79	1.00	.78	6.09	.....	R-L
*6453-A	5	4	6.07	3.40	1.79	1.00	.83	6.09	.....	R-L
*6852	5	5	5.08	3.05	1.78	1.33	1.00	5.10	.....	R-L
*6853	5	4	5.08	3.05	1.78	1.00	.695	5.10	.....	R-L
8051, 8055	5	4	6.25	3.47	1.75	1.00	.67	6.39	.....	R-L
8051-A, 8055-A	5	4	6.25	3.47	1.75	1.00	.83	6.39	.....	R-L
8251, 8255	5	4	5.19	2.88	1.72	1.00	.69	5.31	.....	R-L
8251-A / 8255-A	5	4	5.19	2.88	1.72	1.00	.795	5.31	.....	R-L
5531-Aux.	3	2	2.00	1.00	.72	.....	.....	.....	.....	R-L
5531-A Aux.	3	2	1.52	1.00	.72	.....	.....	.....	.....	R-L
5531-B Aux.	3	2	2.36	1.00	.85	.....	.....	.....	.....	R-L
5531-C Aux.	3	2	1.28	1.00	.85	.....	.....	.....	.....	R-L
5831 Aux.	3	2	2.00	1.00	.73	.....	.....	.....	.....	R-L
5831-A Aux.	3	2	1.54	1.00	.73	.....	.....	.....	.....	R-L
5831-B Aux.	3	2	2.35	1.00	.85	.....	.....	.....	.....	R-L
5831-C Aux.	3	2	1.27	1.00	.85	.....	.....	.....	.....	R-L
6231 Aux.	3	2	2.14	1.00	.69	.....	.....	.....	.....	R-L
6231-A Aux.	3	2	1.24	1.00	.86	.....	.....	.....	.....	R-L
6231-B Aux.	3	2	2.14	1.00	.86	.....	.....	.....	.....	R-L
6231-C Aux.	3	2	1.24	1.00	.69	.....	.....	.....	.....	R-L
6231-D Aux.	3	2	2.14	1.00	.74	.....	.....	.....	.....	R-L
6231-E Aux.	3	2	1.24	1.00	.74	.....	.....	.....	.....	R-L
6231-F Aux.	3	2	1.50	1.00	.86	.....	.....	.....	.....	R-L
8031-A / 8035-A Aux.	3	2	2.59	1.00	.84	.....	.....	.....	.....	R-L
8031-B / 8035-B Aux.	3	2	2.59	1.00	.79	.....	.....	.....	.....	R-L
8031-C / 8035-C Aux.	3	2	2.59	1.00	.75	.....	.....	.....	.....	R-L
8031-D / 8035-D Aux.	3	2	2.24	1.00	.84	.....	.....	.....	.....	R-L
8031-E / 8035-E Aux.	3	2	2.24	1.00	.79	.....	.....	.....	.....	R-L
8031-F / 8035-F Aux.	3	2	2.24	1.00	.75	.....	.....	.....	.....	R-L
8031-G / 8035-G Aux.	3	2	1.29	1.00	.84	.....	.....	.....	.....	R-L
8031-H / 8035-H Aux.	3	2	1.29	1.00	.79	.....	.....	.....	.....	R-L
8031-J / 8035-J Aux.	3	2	1.29	1.00	.75	.....	.....	.....	.....	R-L
8031-K / 8035-K Aux.	3	3	2.59	1.34	1.00	.....	.....	.....	.....	R-L
8031-L / 8035-L Aux.	3	3	2.24	1.34	1.00	.....	.....	.....	.....	R-L
CHEVROLET										
3-Speed	3	3	2.94	1.68	1.00	.....	.....	2.94	.....	No
CLARK										
142-T	3	.....	3.46	1.71	1.00	.....	.....	4.25	.....	R
186-F	4	.....	6.35	3.31	2.49	1.00	.....	7.54	.....	R-L
187-F	4	.....	5.00	2.61	1.89	1.00	.....	5.94	.....	R-L
204-V	5	.....	7.58	4.38	3.05	1.72	1.00	7.51	.....	R-L
204-VO	5	.....	6.06	3.50	1.80	1.00	.799	6.00	.....	R-L
207-VO	5	.....	6.06	3.50	1.80	1.00	.86	6.00	.....	R-L
208-V	5	.....	7.58	4.38	3.05	1.46	1.00	7.51	.....	L
231-F	4	.....	6.35	3.90	1.97	1.00	.....	7.41	.....	R-L
233-F	4	.....	6.35	3.38	1.73	1.00	.....	7.41	.....	R-L
271-T	3	.....	4.06	1.93	1.04	.....	.....	4.50	.....	No
290-V	5	.....	7.88	4.41	2.63	1.48	1.00	7.88	.....	R-L
290-VO	5	.....	7.00	3.93	1.90	1.00	.788	7.00	.....	R-L
291-V	5	.....	7.00	3.93	2.34	1.54	1.00	7.00	.....	R-L
330-F	4	.....	4.88	3.09	1.73	1.00	.....	4.06	.....	No
334-F	4	.....	4.35	2.75	1.71	1.00	.....	3.62	.....	No

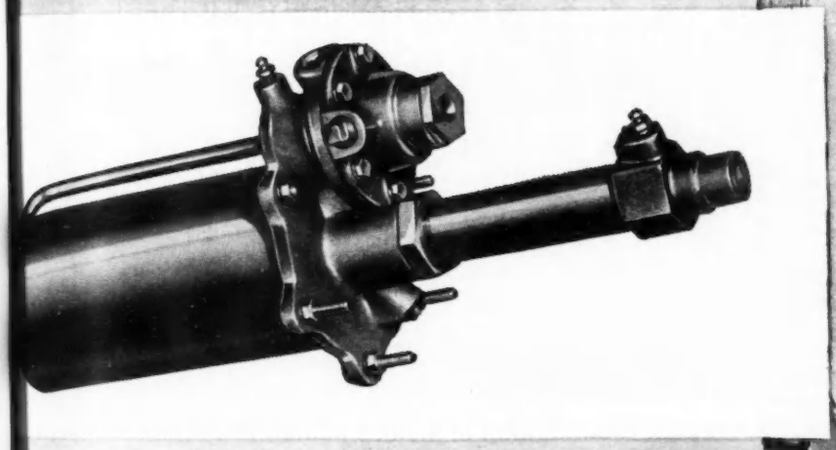
TRANSMISSIONS MAKE AND MODEL	No. of Forward Speeds	Direct Drive on	GEAR RATIOS							Power Take-off, Opening
			Low	Second	Third	Fourth	Fifth	Reverse	High Reverse	
CLARK—cont.										
333-V	5	.....	5.22	3.30	2.05	1.42	.86	4.45	.....	No
185-F	4	4	6.35	3.31	1.73	1.00	.....	7.54	.....	R-L
200-V	5	5	7.58	4.38	2.40	1.48	1.00	6.11	.....	R-L
200-VO	5	4	6.06	3.50	1.91	1.00	.799	4.87	.....	R-L
205-V	5	5	7.58	4.38	2.40	1.48	1.00	7.51	.....	R-L
205-VO	5	4	6.06	3.50	1.91	1.00	.799	6.00	.....	R-L
230-F	4	4	5.00	3.07	1.71	1.00	.....	5.83	.....	R-L
270-V	5	5	7.88	4.46	2.63	1.48	1.00	7.88	.....	R-L
270-VO	5	4	7.00	3.97	1.90	1.00	.788	7.00	.....	R-L
326-V	5	5	8.05	4.34	2.80	1.67	1.00	8.05	.....	R-L
326-VO	5	4	7.08	3.82	1.85	1.00	.788	7.08	.....	R-L
265-V-1	5	5	7 58	4.38	2.40	1.48	1.00	7.51	.....	R-L
267-V-1	5	5	6.06	3.50	1.80	1.18	1.00	6.00	.....	R-L
267-VO-1	5	4	6.06	3.50	1.80	1.00	0.86	6.00	.....	R-L
333F	4	4	4.88	3.09	1.73	1.00	.....	4.06	.....	No
264V	5	5	7.58	4.38	3.05	1.72	1.00	7.51	.....	R-L
264VO	5	4	6.06	3.50	1.80	1.00	.799	6.00	.....	R-L
202V	5	5	7.58	4.38	3.05	1.72	1.00	6.11	.....	R-L
202VO	5	4	6.06	3.50	1.80	1.00	.799	4.87	.....	R-L
292VO	5	4	7.00	3.93	1.90	1.00	.86	7.00	.....	R-L
293V	5	5	7.88	4.68	2.84	1.68	1.00	7.88	.....	R-L
DODGE										
Own PC	3	3	2.57	1.83	1.00	.....	.....	3.49	.....	.....
NP 89905, 89970, 88490, 90620	4	3	3.30	1.78	1.00	.....	.....	4.30	.....	.....
Own M-6	4	4	3.57	2.04	1.75	1.00	.....	3.99	.....	.....
NP 88790	4	4	6.40	3.09	1.69	1.00	.....	7.82	.....	L
NP 89960, 90425, 904700, 88500, -690	4	4	6.40	3.09	1.69	1.00	.....	7.82	.....	R
NP 90240, -360, -410, -450, -550, -560, -630, 89940, -980	4	4	6.40	3.09	1.69	1.00	.....	7.61	.....	R
NP 90460, -480, -490, -500, -510, 89950, -990, 90010	5	5	7.36	4.32	2.385	1.52	1.00	7.16	.....	R
(2) NP 90590, -600, -610, -620, -646, -650	5	4	6.158	3.64	1.89	1.00	0.799	6.00	.....	R
NP 90030, -040, -150, -280, -370	5	5	7.58	4.38	2.395	1.478	1.00	7.51	.....	R-L
(2) NP 90470, -540, -570, -580	5	4	6.06	3.5	1.8	1.00	0.799	6.00	.....	R-L
FORD										
TAAA-A (a), TAAA-B	3	.....	2.78	1.62	1.00	.....	.....	3.635	.....	No
PAD-G-D, PMA-E-C	4	.....	2.44b	1.48	1.00	.....	.....	2.00	.....	No
TBAA-A	3	.....	3.71	1.87	1.00	.....	.....	4.59	.....	No
TEAA-A, THAB-A	4	.....	6.40	3.09	1.69	1.00	.....	7.82	.....	R
TYAA-B	5	.....	6.25	3.64	1.89	1.00	.798	6.17	.....	R
TYAA-A	5	.....	7.41	4.32	2.39	1.52	1.00	7.32	.....	R
TFAA-A	5	.....	6.06	3.50	1.80	1.00	.799	6.00	.....	R-L
TGAA-A	5	.....	7.58	4.38	2.40	1.48	1.00	7.51	.....	R-L
TVAA-A, Aux.	3	.....	1.27	1.00	.85	.....	.....	.....	.....	R-L
TVAA-B, Aux.	3	.....	2.00	1.00	.73	.....	.....	.....	.....	R-L
F.W.D.										
H	5	5	8.23	4.40	2.46	1.41	1.00	8.45	.....	R-L
H	5	4	5.82	3.13	1.75	1.00	.7264	6.07	.....	R-L
H-Aux.	2	2	1.25	1.00	.....	.....	.....	.....	.....	.....
H-Aux.	2	2	2.82	1.00	.....	.....	.....	.....	.....	.....
U. S.	5	5	9.95	5.81	3.15	1.85	1.00	8.97	.....	R-L
U-Aux.	2	2	1.25	1.00	.....	.....	.....	.....	.....	.....
U-Aux.	2	2	2.82	1.00	.....	.....	.....	.....	.....	.....
M	5	5	7.30	4.42	2.74	1.47	1.00	1.00	.....	R-L
M-Aux.	2	2	2.12	1.00	.....	.....	.....	.....	.....	.....
WG-T9A	4	4	5.901	3.09	1.69	1.00	.....	7.213	.....	R
STUDEBAKER										
673519-679807-679146-679800-682058	3	3	3.34	1.85	1.0	.....	.....	4.53	.....	.....
678564-679226	4	3	3.34	1.85	1.0	.700	.....	4.53	.....	.....
680437-681756-681756	4	4	6.4	3.09	1.69	1.0	.....	7.82	.....	R
680438	4	4	5.9	3.09	1.69	1.0	.....	7.21	.....	R
682926*-682927*-681092*	4	4	6.4	3.09	1.69	1.0	.....	7.82	.....	R
WARNER										
T9	4	4	6.40	3.09	1.69	1.00	.....	7.82	.....	R-L
T9A	4	4	5.901	3.09	1.69	1.00	.....	7.21	.....	R
T9B	4	4	6.40	3.09	2.21	1.00	.....	7.82	.....	R
T9C	4	4	6.40	4.07	2.69	1.00	.....	7.82	.....	R
T87D*	3	3	3.714	1.871	1.00	.....	.....	4.588	.....	No
T89B	3	.....	3.17	1.75	1.00	.....	.....	3.76	.....	No
T90A*-T90C*	3	3	2.798	1.551	1.00	.....	.....	3.798	.....	No
T90B* (3)	3	3	3.34	1.85	1.00	.....	.....	4.53	.....	No
T90D*, T90F*, T90H*	3	3	3.339	1.851	1.00	.....	.....	4.53	.....	No
T90E*	3	3	3.34	1.851	1.00	.....	.....	4.53	.....	No
T97	4	4	6.398	3.092	1.686	1.00	.....	7.820	.....	R
T98	4	4	6.398	3.092	1.686	1.00	.....	7.820	.....	R-L
WATSON										
2021 Aux. (o'drive)	2	1	1.00	.82	.....	.....	.....	.....	.....	No
2021 Aux. (und'drive)	2	2	1.22	1.00	.....	.....	.....	.....	.....	L
41-Aux.	3	2	1.26	1.00	.830	.....	.....	.....	.....	R-L
42-Aux.	3	2	1.49	1.00	.830	.....	.....	.....	.....	R-L
43-Aux.	3	2	2.11	1.00	.830	.....	.....	.....	.....	R-L
47-Aux.	3	3	1.49	1.20	1.00	.....	.....	.....	.....	R-L
48-Aux.	3	3	2.11	1.20	1.00	.....	.....	.....	.....	No
6041 Aux.	4	3	2.14	1.24	1.00	.860	.....	.....	.....	

For Fuller Models and explanation of symbols see page 132

Bendix

AIR-PAK

combines the advantages of air power with hydraulic brake actuation



Here, with a single compact, easy-to-install power braking unit, truck manufacturers and operators can combine all of the well proven advantages of hydraulic brake actuation with an air brake system.

Bendix* Air-Pak changes air pressure into hydraulic pressure by means of two directly connected pistons. Thus, a non-compressible column of brake fluid instead of air connects between the driver's foot and the brake shoe. The result is faster brake action, more positive and better control.

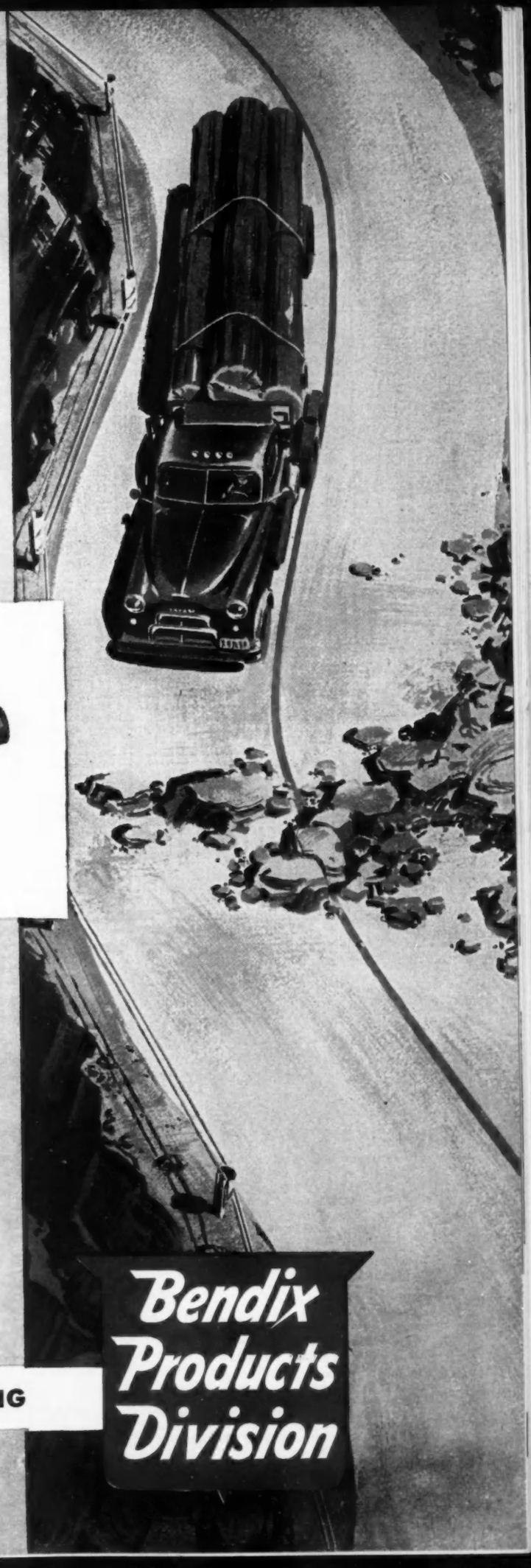
Another important Air-Pak advantage is the fact that brakes can be applied instantly by foot power alone—an emergency standby when braking is required before air pressure builds up, or if air pressure fails for any reason.

Important, too, is the fact that Air-Pak is a product of Bendix, designer and builder of Hydrovac*, the world's most widely used power brake with over three million units now in use.

Thus Air-Pak benefits from a specialized engineering and manufacturing experience unrivalled in the automotive industry.

Descriptive folder on Air-Pak is available on request.

*REG. U.S. PAT. OFF.



Bendix Products Division

THE MOST TRUSTED NAME IN BRAKING

BENDIX • PRODUCTS DIVISION • SOUTH BEND, INDIANA

Export Sales: Bendix International Division, 205 East 42nd St., New York 17, N.Y. Canadian Sales: Bendix-Eclipse of Canada, Ltd., Windsor, Ontario, Canada

Bendix AVIATION CORPORATION

April, 1954

TRANSMISSION RATIOS—(Continued from page 130)

Model	No. Speeds	Direct Drive In	Over Drive In	GEAR RATIOS 1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Low Rev.	High Rev.	▲Installation Dimension Inches	Weight Lbs.	Control C—Center F—Forward R—Remote	Clutch Housing Size	Oil Capacity In Pints	PTO Opening	Relative Speed PTO Gear to Input RPM Right	Left
FULLER																							
4-A-86	4	4	.....	6.54	3.27	1.76	1.00	.....	.....	.....	.....	.....	.....	7.24	.....	23½	420	C or R	1,2	17	R & L	.553	.553
4-B-86	4	4th	.....	5.55	3.27	1.76	1.00	.....	.....	.....	.....	.....	.....	6.56	.....	23½	420	C or R	1,2	17	R & L	.553	.553
4-A-860	4	3rd	4th	3.72	1.86	1.00	.76	.....	.....	.....	.....	.....	.....	4.12	.....	23½	420	C or R	1,2	17	R & L	.973	.973
4-A-112	4	4th	.....	6.54	3.27	1.76	1.00	.....	.....	.....	.....	.....	.....	6.49	.....	25½	525	F or R	1,2	21	R & L	.553	.302‡
5-A-33	5	5th	.....	7.53	4.30	2.52	1.42	1.00	.....	.....	.....	.....	.....	7.37	.....	20½	210	C or R	2,3,4	11	R	.271	.....
5-A-330	5	4th	5th	6.10	3.48	1.795	1.00	.768	.....	.....	.....	.....	.....	5.96	.....	20½	210	C or R	2,3,4	11	R	.338	.....
5-B-33	5	5th	.....	7.53	4.30	2.52	1.42	1.00	.....	.....	.....	.....	.....	7.37	.....	20½	218	C or R	2,3,4	11	R & L	.485	.485
5-B-330	5	4th	5th	6.10	3.48	1.795	1.00	.768	.....	.....	.....	.....	.....	5.96	.....	20½	218	C or R	2,3,4	11	R & L	.575	.575
5-A-43	5	5th	.....	8.03	4.61	2.46	1.41	1.00	.....	.....	.....	.....	.....	8.00	4.71▲	22½	330	C or R	1,2,3	16	R & L	.444	.218
5-A-430	5	4th	5th	6.52	3.33	1.77	1.00	.771	.....	.....	.....	.....	.....	6.50	3.33▲	22½	330	C or R	1,2,3	16	R & L	.548	.285
5-A-62	5	5th	.....	8.08	4.67	2.62	1.38	1.00	.....	.....	.....	.....	.....	8.12	4.74▲	24½	370	C or R	1,2,3	24	R & L	.429	.429
5-A-620	5	4th	5th	7.07	3.50	1.72	1.00	.776	.....	.....	.....	.....	.....	7.11	3.55▲	24½	370	C or R	1,2,3	24	R & L	.489	.489
5-A-65	5	5th	.....	8.08	4.67	2.62	1.38	1.00	.....	.....	.....	.....	.....	8.12	4.74▲	24½	411	F or R	1,2	24	R & L	.429	.429
5-A-650	5	4th	5th	6.37	3.40	1.74	1.00	.788	.....	.....	.....	.....	.....	6.40	3.35▲	24½	411	F or R	1,2	24	R & L	.543	.543
5-C-65	5	5th	.....	8.08	4.67	2.62	1.38	1.00	.....	.....	.....	.....	.....	8.12	4.74▲	24½	411	C or R	1,2	24	R & L	.429	.429
5-C-650	5	4th	5th	6.37	3.40	1.74	1.00	.788	.....	.....	.....	.....	.....	6.40	3.35▲	24½	411	C or R	1,2	24	R & L	.543	.543
5-C-72	5	5th	.....	7.33	4.43	2.62	1.38	1.00	.....	.....	.....	.....	.....	7.33	.....	25½	465	C or R	1,2	24	R & L	.429	.229
5-C-720	5	4th	5th	6.37	3.40	1.74	1.00	.75	.....	.....	.....	.....	.....	6.42	.....	25½	465	C or R	1,2	24	R & L	.543	.291
5-A-1120	5	4th	5th	6.54	3.27	1.76	1.00	.744	.....	.....	.....	.....	.....	6.49	.....	31	681	F or R	1,2	29	R & L	.553	.302‡
5-F-1220	5	4th	5th	6.54	3.356	1.748	1.00	.744	.....	.....	.....	.....	.....	5.06	.....	31	667	F or R	1	29	R & L	.553	.367‡
5-FS-1220†	5	4th	5th	2.58	1.928	1.386	1.00	.747	.....	.....	.....	.....	.....	3.035	.....	31	705	F or R	1	29	R & L	.698	.488
10-FA-65	10	10th	.....	18.567	10.731	8.08	6.02	4.67	3.17	2.62	2.298	1.38	1.00	18.659	8.12	39½	766	F or R	1,2	31	R & L	.429	.429
10-FA-650	10	9th	10th	14.638	7.822	6.37	3.993	3.404	2.298	1.81	1.738	1.00	.788	14.707	6.40	39½	766	F or R	1,2	31	R & L	.543	.543
10-FB-65	10	10th	.....	10.609	8.08	6.13	4.67	3.44	2.62	2.219	1.69	1.313	1.00	10.661	8.12	39½	766	F or R	1,2	31	R & L	.429	.429
10-FB-650	10	9th	10th	8.364	6.37	4.469	3.404	2.282	1.738	1.313	1.034	1.00	.788	8.403	6.40	39½	766	F or R	1,2	31	R & L	.543	.543
10-CA-65	10	10th	.....	18.567	10.731	8.08	6.02	4.67	3.17	2.62	2.298	1.38	1.00	18.659	8.12	39½	766	C or R	1,2	31	R & L	.429	.429
10-CA-650	10	9th	10th	14.638	7.822	6.37	3.993	3.404	2.298	1.81	1.738	1.00	.788	14.707	6.40	39½	766	C or R	1,2	31	R & L	.543	.543
10-CB-65	10	10th	.....	10.609	8.08	6.13	4.67	3.44	2.62	2.219	1.69	1.313	1.00	10.661	8.12	39½	766	C or R	1,2	31	R & L	.429	.429
10-CB-650	10	9th	10th	8.364	6.37	4.469	3.404	2.282	1.738	1.313	1.034	1.00	.788	8.403	6.40	39½	766	C or R	1,2	31	R & L	.543	.543
10-A-1120	10	9th	10th	15.04	7.52	6.54	4.05	3.27	2.30	1.76	1.711	1.00	.744	14.93	6.49	43½	960	F or R	1,2	36	R & L	.553	.302‡
10-B-1220	10	8th	9-10	h 8.59	6.54	4.04	3.08	2.31	1.76	1.31	1.00	.835	.636	8.52	6.49	43½	960	F or R	1,2	36	R & L	.553	.302‡
10-F-1220	10	8th	9-10	6 526	4.97	3.923	2.985	2.296	1.748	1 313	1 00	.835	.636	5.029	3.83	43½	982	F or R	1	36	R & L	.553	.367
R-45†	8	8th	.....	9.76	6.98	4.99	3.68	2.66	1.90	1.36	1.00	.....	.....	11.01	2.99	29½	457	C or R	1,2,3	17	R & L	.71	.71
R-95-C†	10	10th	.....	9.70	7.45	5.82	4.49	3.55	2.73	2.10	1.64	1.27	1.00	12.50	3.52	40½	827	C or R	1,2	32	R & L	.628	.411
R-950-C-†	10	9th	10th	7.45	5.82	4.49	3.55	2.76	2.10	1.64	1.27	1.00	.779	9.89	2.78	40½	804	C or R	1,2	32	R & L	.628	.628
UR	2	1st R	.....	1.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.00	.....	14	152	.....	1,2,3	8	.....	.....	.....
UR 1.63	2	2nd	.....	1.63	1.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14	152	.....	1,2,3	8	.....	.....	.....
AR	2	1st R	.....	1.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.00	.....	11½	120	R	.....	8	.....	.....	.....
AR 1.63	2	2nd	.....	1.63	1.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11½	120	R	.....	8	.....	.....	.....
2-A-62	2	2nd	.....	1.58	1.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9½	185	R	.....	7	.....	.....	.....
2-B-62	2	2nd	.....	1.33	1.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9½	185	R	.....	7	.....	.....	.....
2-A-92	2	2nd	.....	2.298	1.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16	315	R	.....	12	.....	.....	.....
2-B-92	2	2nd	.....	1.313	1.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16	315	R	.....	12	.....	.....	.....
3-A-65	3	2nd	3rd	2.221	1.00	.754	.....	.....	.....	.....	.....	.....	.....	.....	.....	19	270	R	.....	13	R & T‡	.941	.....
3-B-65	3	2nd	3rd	1.239	1.00	.804	.....	.....	.....	.....	.....	.....	.....	.....	.....	19	270	R	.....	13	R & T‡	.941	.....
3-A-92	3	2nd	3rd	2.09	1.00	.754	.....	.....	.....	.....	.....	.....	.....	.....	.....	22	350	R	.....	17	R & T§	1.036	.....
3-B-92	3	2nd	3rd	1.235	1.00	.836	.....	.....	.....	.....	.....	.....	.....	.....	.....	22	350	R	.....	17	R & T§	1.036	.....
3-T-92	3	2nd	3rd	2.09	1.00	.754	.....	.....	.....	.....	.....	.....	.....	.....	.....	22	553	R	.....	24	.....	.....	.....
PD-45	2	2nd	.....	1.90	1.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20½	328	R	.....	14	.....	.....	.....
3-BX	1	.....	.....	1.08	(Multiply Forward Gear Ratios of Unit Mounted Transmissions by 1.08)											.....	65	R	.....	.....	.....	.....	.....
3-PT-65	2	.....	.....	1.03	(Multiply Forward Gear Ratios of Unit Mounted Transmission by 1.03 and 1.015)											.....	100	R	.....	.....	.....	.....	.....

ABBREVIATIONS

*—Transmissions Synchronized.
†—Close Spaced Ratios.
‡—See 3-PT-65.
§—See 3-BX.
‡—Varies with Rev. Gear Ratios.
▲—Additional Ratio Optional at Extra Cost.
(1)—Spicer Mfg. Co.
(2)—Overdrive.
(3)—Also available with R10B overdrive.
L—Left side opening.
R-L—Right and left side openings.
R—Right side opening.
a—Lo-Low-2.10, converter stall ratio.
b—Overdrive ratio, 0.70 to 1.

Transportation Engineering Formulas

PISTON DISPLACEMENT

Piston Displacement in cu. in. = B × B × .7854 × S × No. of Cylinders

B = Bore
S = Stroke

.7854 = Constant comprising the conversion of the area of a square to the area of a circle of the same dimensions

VEHICLE SPEED

$$MPH = \frac{RPM \times R}{168 \times FGR}$$

MPH = Miles Per Hour
RPM = Engine Revolutions Per Minute
R = Rolling Radius in Inches
FGR = Final Gear Ratio
168 = A constant comprising the conversion of rolling radius in inches to wheel circumference in feet; wheel revolutions per minute to wheel revolutions per hour; feet per hour to miles per hour

HORSEPOWER

Maximum Net Horsepower (maximum gross horsepower less power consumed by engine accessories) is the only horsepower that should be used in transportation engineering formulas, and can be determined only by using a dynamometer or may be procured from the manufacturer

MAX. NET ENGINE TORQUE

Torque in lb. ft. = .80 × cu. in. Piston Displacement. (This is approximate and should be used only when actual torque is not known)

.80 = Average figure based on analysis of a number of torque curves.

AMA HORSEPOWER

(For License Purposes Only)

$$AMA\ HP = \frac{B \times B \times No.\ of\ Cyl.}{2.5}$$

B = Cylinder Bore
2.5 = Constant based on average engine in 1908

MAXIMUM NET TORQUE

$$Max.\ Net\ Torque = \frac{Torque\ at\ Peak\ HP \times 5}{4}$$

(This is approximate and should be used only when actual net torque is not known.)

5 and 4 = Figures based on an analysis of a number of torque curves

TORQUE AT PEAK HP

$$Torque\ at\ Peak\ HP = \frac{HP \times 5252}{RPM}$$

5252 = Constant resulting from the conversion of torque and RPM into horsepower

HP = Maximum net horsepower (See Horsepower formula)

Peak HP = Maximum useful horsepower

California

"We have used KromeX Ring Sets in all types of units with fine results. A 1951 Chevrolet taxi was driven over 90,000 miles after reringing with KromeX at 55,000. Oil consumption was still satisfactory and top cylinder wear did not exceed .010 in a total of 145,000 miles. Sealed Power KromeX Ring Sets give top performance in oil control and reduced cylinder wear."

Jack George, Service Manager, Chino, California

Michigan

"We recently installed a KromeX Ring Set in a straight 8 which was burning a quart of oil every 40 miles. After the second oil change at 1200 miles, oil consumption stopped. Power, performance, and gasoline mileage increased way beyond our expectation. This is only one of many KromeX jobs we have done, and to date we have never experienced a KromeX Ring Set failure."

W. R. Rodberg, Pingel & Rodberg, Niles, Michigan

New Jersey

"In my shop we install an average of two KromeX Ring Sets every week and I have yet to have a come-back. This includes trucks as well as cars. Seating is not a problem, either, as KromeX Ring Sets always seat fast enough to give complete customer satisfaction. Thanks for a quality product I can depend on 100%."

Phil Hornung, Hornung Automotive Service
West Orange, New Jersey

Read what Mechanics say about

Sealed Power KromeX

Piston Ring Sets

Missouri

"There is nothing but the best we can say about KromeX Ring Sets, which we have been using for the past year with wonderful results. Less drag, smoother running engines and a noticeable increase in gasoline mileage. We would definitely recommend Sealed Power KromeX Ring Sets to any and all who are interested in doubling piston ring life with less wear on cylinder walls."

E. B. Vawter, Vawter Brothers Garage, Marshall, Missouri

Massachusetts

"Recently we installed a Sealed Power KromeX Ring Set in a 1950 straight 8. The owner was a very fussy customer, and several weeks later he told us where he used to get 12 to 14 miles per gallon, he now gets 17. This car used 1 quart of oil in the first 400 miles, and none in the next 800."

George W. Chartrand, Joseph H. Chartrand
Hudson Auto Parts, Hudson, Mass.

North Carolina

"After approximately two years of installing Sealed Power KromeX Ring Sets, we are confident that they are a great improvement in the engine of today. We have experienced no difficulty, and when we install KromeX Ring Sets, we know we are giving our customers the best that money can buy, plus long, pleasant miles of additional service."

W. C. Alford, V. P., Yates Auto Service
Raleigh, North Carolina

FACTORY SEATED FOR FAST BREAK-IN!

SEALED POWER CORPORATION, MUSKEGON, MICHIGAN

Sealed Power Piston Rings

BEST IN NEW TRUCKS! BEST IN OLD TRUCKS!

Sealed Power Motor Parts • The Heart of the Engine • Rings, Pistons, Pins, Sleeves, Valves, Water Pumps

THIRD AXLES

and

TRAILER SUSPENSIONS

(Continued on page 136)

NOTES ON HEADINGS

Column 1.—**—C—Chevrolet, D—Dodge, F—Ford, V—Various.

Note 1. Two-axle self-steering undercarriage uses any standard trailer axle.

Note 2. Suspension kit only is available for conversion of single axle trailers to tandems.
†—13,000 lb. axle available in 68.1 and 69.5 track.
††—17,000 lb. axle available in 71.5 track.

Column 2.—Not to be confused with the total capacity made possible on the converted vehicle.

Column 3.—The price of the unit includes the standard brakes specified in brake column and frame extensions.

Column 4.—Weight of third axle unit includes all appurtenances and maximum tires.
*—Does not include axle.
**—Does not include frames, wheels, axles, etc.

Column 15.—Attachment unit only.

ABBREVIATIONS

COLUMN 9

Chev—Chevrolet
Shu—Shuler
Tim—Timken
Wag—Wagner Hi-Tork

COLUMN 10

D—Driving
Re—Rectangular
SF—Standard Forge
Sr—Solid round
Sq—Square
T—Tubular

COLUMN 12

A—Air
B—Bendix
C—Chevrolet
F—Ford
H—Hydraulic
L—Lockheed
M—Mechanical
O—Own
V—Vacuum Power
W—Westinghouse
†—Own or Westinghouse optional

COLUMN 13

C—Cast Iron
CA—Cast Alloy Iron

‡‡—On application.
(a)—Long slip-spline joint supplied for drive axle in place of radius rods.
(f)—Optional equipment.
(g)—Round, square or I-sectional axles.
(h)—Available with hand or electric cab-operated hydraulic pump for transferring axle load for added traction or for raising axle clear of ground.
(j)—Includes weight of hydraulic load transfer system.
(k)—Original track mainspring and overload spring also used.
(x)—Patented 4-wheel chain drive available.
(y)—All Truxmore units equipped with radius rods on driving axle and load distribution may be adjusted within limits shown in columns 6 and 7.
(z)—Depends upon installation.
Var—Various
(1)—A—16½x5½
(2)—A—16½x6
(3)—A—16½x5

THIRD AXLE MAKE AND MODEL and Truck Model Adapted to — Trailing Axles	Capacity (Lb.) See Explanatory Notes	Price (f. o. b. factory)	Weight (Lb.) with Max. Tires, Frame Extension, Etc.	Maximum Tire Size	LOAD DISTRIBUTION RANGE (First figure or combination applies to center axle; second figure to third axle)		Axle Spacing (in inches) (with maximum tires)	AXLE DATA			BRAKES (Standard)				Number of Points of Frame Support	Spring Size or Number Leaves Added	Spindle Diameter (at inner bearing)
								Make	Type	Size	Make and Type	Drum Material	Brake Diameter and Width	Lining Area			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
FABCO																	
1200 (Ford, Chevrolet)	11000	.....	2000	8.25/20	56–44	.....	48½	Var	T	4½	LH	CA	15x3½	192	2	53x2½	2⅞
1200 (All other makes)	11000	.....	2000	8.25/20	56–44	.....	48½	Var	T	4½	LH	CA	15x3½	192	2	53x2½	2⅞
1250 (F700 Ford)	13000	.....	2500	9.00/20	56–44	.....	48½	Var	T	4½	M	CA	16½x5	325	2	56x3	3
1250 (All other makes)	13000	.....	2500	9.00/20	56–49	.....	48½	Var	T	4½	M	CA	16½x5	325	2	56x3	3
1000 (F750-800-900 Ford)	14000	.....	3000	11.00/22	56–44	.....	48½	Var	T	4½	M	CA	16½x5	325	2	56x3	3
	14000	.....	3000	11.00/22	56–44	.....	52	Var	T	4½	M	CH	16½x6	435	2	60x3	3
1000 (All other makes)	14000	.....	3000	11.00/22	56–44	.....	48½	Var	T	4½	M	CA	16½x5	325	2	56x3	3
	14000	.....	3000	11.00/22	56–44	.....	52	Var	T	4½	M	CH	16½x6	435	2	60x3	3
Texas Special	14000	.....	2200	11.00/22	35–65	.....	Var	Var	.....	4½	M	.....	Var	.....	2	Var	3
GRICO SUPER-FLEX																	
T-1300	12000	‡‡‡	2360	9.00	50–50	.....	48	Shu	T	4½	H	CA	16x4 or 5	340	2	4, 18	.....
T-1400	14000	‡‡‡	2640	10.00	50–50	.....	48	Shu	T	4½	H	CA	16x5	410	2	4, 18	.....
T-1410	14000	‡‡‡	2640	10.00	50–50	.....	48	Shu	T	4½	A	CA	16½x6	434	2	.....	.....
T-1600	16000	‡‡‡	2815	11.00	50–50	.....	48	Shu	T	5	A-V	CA	16½x6	444	2	4, 18	.....
T-1610	16000	‡‡‡	2815	11.00	50–50	.....	48	Shu	T	5	A-V	CA	16½x7	512	2	4, 18	.....
LITTLE GIANT																	
A	11000	.....	1920	8.25/20	53–47	42	42	Own (g)	Sq	2¾	WagH	CA	15x4	253.5	2	42x2½	2⅛
					50–50	49(f)										49x2½(f)	.....
B	13000	.....	2450	9.00/20	50–50	44	44	Own (g)	Sq	3	WahH	CA	16x4	270.7	2	44x3	2⅛
					50–50	49(f)	49									49x3(f)	.....
C	15000	.....	2850	10.00/20	50–50	44	44	Own (g)	Sq	3¼	WagHA	CA	16x5	338	2	44x3½	3⅛
					50–50	49(f)	49									49x3½(f)	.....
D	18000	.....	3050	11.00/20	50–50	49	49	Own (g)	Sq	3½	WagHA	CA	16x6	406	2	49x3½	3¼
SUPER LOAD BOOSTER (Pusher)**																	
LB 26 (C, D, F, V 1½ & 2 ton)	13000	.....	2650	8.25/20	50–50	.....	48	Own	T	4½	VH	CA	15x4	251	2	48x3½	2⅝
LB 30 (F Ford F700 & F750)	15000	.....	2820	9.00/20	50–50	.....	48	Own	T	5	VH	CA	16x5	345	2	48x3½	3¼
LB 30 (D, V 1½ & 2 ton)	15000	.....	2820	9.00/20	50–50	.....	48	Own	T	4½	VH	CA	15x4	251	2	48x3½	3
LB 34 (D, F, V 3 ton)	17000	.....	3280	10.00/20	50–50	.....	48	Own	T	5	VH or A	CA	16x5	345	2	48x3½	3¼
LB 40 (D, F, V 3½ ton)	20000	.....	3480	11.00/20	50–50	.....	48	Own	T	5	VH or A	CA	16x6	370	2	48x3½	3⅜
NEWAY (Pusher)																	
R-334	17000	.....	.....	11.00/20	50–50	.....	48–49	Var	Var	Var	Var	Var	Var	Var	2	.....	Var
R-336, 836	18000	.....	.....	11.00/20	50–50	.....	48–49	Var	Var	Var	Var	Var	Var	Var	2	.....	Var
R-842	21000	.....	.....	11.00/20	50–50	.....	48–49	Var	Var	Var	Var	Var	Var	Var	2	.....	Var
R-402	22000	.....	.....	11.00/20	50–50	.....	48–49	Var	Var	Var	Var	Var	Var	Var	2	.....	Var
REYCO																	
17214-1 (For any 1½–3-ton truck)	14000	††	881**	11.00/22	50–50	52–48	50–¾	Var	Var	Var	Var	Var	Var	Var	6	43¼x3	.....
17218-1 (For any 3½–5-ton truck)	18000	††	937**	11.00/22	50–50	52–48	50–¾	Var	Var	Var	Var	Var	Var	Var	6	43¼x3	.....
17222-1 (For trucks over 5 tons)	22000	††	1077**	11.00/22	50–50	52–48	50–¾	Var	Var	Var	Var	Var	Var	Var	6	43¼x3	.....
1100 (For any 3½ to 5-ton truck)	18000	††	1020**	11.00/22	50–50	52–45	50	Var	Var	Var	Var	Var	Var	Var	6	43½x3	.....
MAXI CORP. "MAXI"																	
15	13000	.....	1800	7.50/20	55–45	.....	45	Var	T	4½	Var	Var	Var	Var	1	45x3½	Var
15	13000	.....	1800	8.25/20	55–45	.....	45	Var	T	4½	Var	Var	Var	Var	1	45x3½	Var
15	13000	.....	1800	9.00/20	55–45	.....	45	Var	T	4½	Var	Var	Var	Var	1	45x3½	Var
15	15000	.....	1800	8.25/20	55–45	.....	45	Var	T	4½	Var	Var	Var	Var	1	45x3½	Var
15	15000	.....	1800	9.00/20	55–45	.....	45	Var	T	4½	Var	Var	Var	Var	1	45x3½	Var
15	15000	.....	1800	10.00/20	55–45	.....	45	Var	T	4½	Var	Var	Var	Var	1	45x3½	Var
20	18000	.....	2100	10.00/20	52–48	.....	48	Var	T	5	Var	Var	Var	Var	1	48x3½	Var
20	18000	.....	2100	10.00/22	52–48	.....	48	Var	T	5	Var	Var	Var	Var	1	48x3½	Var
20	18000	.....	2100	11.00/20	52–48	.....	48	Var	T	5	Var	Var	Var	Var	1	48x3½	Var
20	18000	.....	2100	11.00/22	52–48	.....	48	Var	T	5	Var	Var	Var	Var	1	48x3½	Var
20	20000	.....	2250	11.00/20	52–48	.....	48	Var	T	5	Var	Var	Var	Var	1	48x3½	Var
20	20000	.....	2250	11.00/22	52–48	.....	48	Var	T	5	Var	Var	Var	Var	1	48x3½	Var

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Third Axle Specifications (Continued on page 138)

THIRD AXLE MAKE AND MODEL and Truck Model Adapted to	Capacity (Lb.) See Explanatory Notes	Price (f. o. b. factory)	Weight (Lb.) with Max. Tires, Frame Extension, Etc.	Maximum Tire Size	LOAD DISTRIBUTION RANGE (First figure or combination applies to center axle; second figure to third axle)		Axle Spacing (in inches) (with maximum tires)	AXLE DATA			BRAKES (Standard)				Number of Points of Frame Support	Spring Size or Number Leaves Added	Spindle Diameter (at inner bearing)
								Make	Type	Size	Make and Type	Drum Material	Brake Diameter and Width	Lining Area			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
TRAILMOBILE																	
CTA-32 (All trucks 2 to 4½ ton)	13000	‡‡	2100	11.00/22	58–42	.....	48	Tim	T	4½	Tim	CA	16½x6	434	4	None	2⅞
CTA-42 (All heavy-duty trucks)	18000	‡‡	2300	11.00/22	58–42	.....	48	Tim	T	5	Tim	CA	16½x6	434	4	None	3¼
TRUCK EQUIPMENT CO. (Duaload)																	
825 C, F, X 1½ to 2 ton	12000	‡‡	2400	8.25/20	51–49	62–38	44	Own	Sq	2¾	H	CA	15x3½	200	4	(a)	2 11/16
825 CL, FL, XL 1½ to 2 ton	12000	‡‡	2400	8.25/20	51–49	62–38	48¼	Own	Sq	2¾	H	CA	15x3½	200	4	(a)	2 11/16
TRUCKSTELL HYDRO-TRAC																	
300 Chev. 6000	13000	.....	1884(j)	9.00/20	50–50	80–20(h)	48½	SF	T	4½	WagH	CA	15x4	236	4	28½x3 7/16 (k)	2½
300 Dodge H	13000	.....	1840(j)	8.25/20	50–50	80–20(h)	50	SF	T	4½	WagH	CA	15x4	236	4	28½x3 7/16 (k)	2½
300 Dodge J	13000	.....	1840(j)	8.25/20	50–50	80–20(h)	50	SF	T	4½	WagH	CA	15x4	236	4	28½x3 7/16 (k)	2½
300 Dodge K	13000	.....	1890(j)	9.00/20	50–50	80–20(h)	50	SF	T	4½	WagH	CA	15x4	236	4	28½x3 7/16 (k)	2½
300 Ford F-600	13000	.....	1820(j)	8.25/20	50–50	80–20(h)	50	SF	T	4½	WagH	CA	15x4	236	4	28½x3 7/16 (k)	2½
300 Light trucks†	13000	.....	1880(j)	9.00/20	50–50	80–20(h)	50	SF	T	4½	WagH	CA	15x4	236	4	28½x3 7/16 (k)	2½
400 Dodge R	17000	.....	2100(j)	9.00/20	50–50	80–20(h)	50	SF	T	5	SFA	CA	16½x6	444	4	28½x3 7/16 (k)	2½
400 Ford F-700, F-750	13000	.....	1900(j)	9.00/20	50–50	80–20(h)	50	SF	T	4½	WagH	CA	15x5	295	4	28½x3 7/16 (k)	2½
400 Medium trucks†	13000	.....	1900(j)	9.00/20	50–50	80–20(h)	50	SF	T	4½	WagH	CA	15x5	295	4	28½x3 7/16 (k)	2½
500 Dodge T	17000	.....	2320(j)	10.00/20	50–50	80–20(h)	50	SF	T	5	WagH	CA	16x5	315	4	28½x3 7/16 (k)	2½
500 Dodge V	17000	.....	2430(j)	11.00/20	50–50	80–20(h)	50	SF	T	5	SFA	CA	16½x6	444	4	28½x3 7/16 (k)	2½
500 Ford F-800	17000	.....	2290(j)	10.00/20	50–50	80–20(h)	50	SF	T	5	WagH	CA	16x5	315	4	28½x3 7/16 (k)	2½
500 Ford F-800	17000	.....	2358(j)	10.00/20	50–50	80–20(h)	50	SF	T	5	SFA	CA	16½x6	444	4	28½x3 7/16 (k)	2½
500 Ford F-900	17000	.....	2325(j)	11.00/20	50–50	80–20(h)	50	SF	T	5	WagH	CA	16x5	315	4	28½x3 7/16 (k)	2½
500 Ford F-900	17000	.....	2398(j)	11.00/20	50–50	80–20(h)	50	SF	T	5	SFA	CA	16½x6	444	4	28½x3 7/16 (k)	2½
500 Heavy trucks††	17000	.....	2290(j)	11.00/20	50–50	80–20(h)	50	SF	T	5	WagH	CA	16x5	315	4	28½x3 7/16 (k)	2½
500 Heavy trucks††	17000	.....	2358(j)	11.00/20	50–50	80–20(h)	50	SF	T	5	SFA	CA	16½x6	444	4	28½x3 7/16 (k)	2½
TRUCKTOR (x)																	
HLL (Ford 1½ ton)	8800	1100	1750	7.50/20	53–47	.....	45	Own	Sr	3	LHV	CA	15x3½	196	6	38½x2½	2⅝
HLL (Chevrolet 1½ ton)	8800	1100	1750	7.50/20	53–47	.....	45	Own	Sr	3	LHV	CA	15x4	219	6	38½x2½	2⅝
HLL (Light trucks, tires to 8.25/20)	11000	1100	1895	8.25/20	53–47	.....	45	Own	Sr	3	LHV	CA	16x2¼	132	6	38½x2½	2½
HLS (Medium trucks, tires to 9.00/20)	14000	1490	2265	9.00/20	53–47	.....	46	Own	Sr	3¼	LHV	CA	15x5	265	6	38½x3	2¾
HLS (Ford F-7, tires to 9.00/20)	14000	1490	2265	9.00/20	53–47	.....	46	Own	Sr	3¼	LHV	CA	15x5	218	6	38½x3	2¾
HLR (Heavy trucks, tires to 10.00/20)	16000	1945	2710	10.00/20	53–47	.....	48	Own	Sr	3½	WAM	CA	16½x6	251	6	40x3	2 11/16
HLR (Ford F-8, tires to 10.00/20)	16000	1945	2710	10.00/20	53–47	.....	48	Own	Sr	3½	LHV	CA	16x5	335	6	40x3	2 11/16
HR (Heavy-duty, tires to 12.00/20)	21000	2120	3177	11.00/24	53–47	.....	52	Own	Sr	4	WAM	CA	16½x8	251	6	41½x3	3 1/16
HR-5 (Extra heavy-duty)	30000	‡‡	3358	12.00/24	53–47	.....	53½	Own	Sr	5½	WAM	CA	17¼x5½	380	6	43½x4	3½
TRUXMORE (y)																	
280 Series	12000	‡‡	2400	8.25/20	51–49	62–38	44½–48	Own	Sq	2¾	H	CA	15x3½	200	4	**	2 11/16
340 (Standard)	14000	‡‡	2700	9.00/20	50–50	58–42	47–48	Own	Sq	3	H	CA	16x3½	210	4	**	2 11/16
340HT (Hi-tork brake)	14000	‡‡	2750	9.00/20	50–50	58–42	47–48	Own	Sq	3	H	CA	16x5	340	4	**	2 11/16
340A (Air brake)	14000	‡‡	2800	9.00/20	50–50	58–42	47–48	Own	Sq	3	MW	CA	16½x4	305	4	**	2 11/16
400 (Hi-tork Hyd. brake)	16000	‡‡	3100	10.00/20	51–49	60–40	48–49	Own	Sq	3¼	H	CA	16x5	340	4	**	3 1/16
400 (Oversize brake)	16000	‡‡	3150	10.00/20	51–49	60–40	48–49	Own	Sq	3¼	H	CA	16x6	410	4	**	3 1/16
400A (Air brake)	16000	‡‡	3200	10.00/20	51–49	60–40	48–49	Own	Sq	3¼	MW	CA	16½x5	380	4	**	3 1/16
450 (Hi-tork Hyd. brake)	18000	‡‡	3400	11.00/20	51–49	60–40	49–50	Own	Sq	3¼–3½	H	CA	16x6	410	4	**	3¼
450A (Air brake)	18000	‡‡	3450	11.00/20	51–49	60–40	49–50	Own	Sq	3¼–3½	MW	CA	16½x6	455	4	**	3¼
50H (Hyd. brake)	20000	‡‡	3800	11.00/24	50–50	65–35	49–53	Own	Sq	3½	H	CA	17¼x5	360	4	**	3⅜
50A (Air brake)	20000	‡‡	3850	11.00/24	50–50	65–35	49–53	Own	Sq	3½	MW	CA	17¼x5½	410	4	**	3⅜
UTILITY																	
25	9000	‡‡	1330	8.25/20	55–45	.....	41	Own	Sq	2½	BH†	CA	16x3½	230	4	None	2¼
30	13000	‡‡	1880	10.00/20	55–45	68–33	44	Own	Sq	3	BH†	CA	17x4	270	4	None	2¾
35	18000	‡‡	2285	11.00/24	55–45	68–33	50	Own	Sq	3½	OMV†	CA	16x5	300	4	None	3

Driving Axles

FABCO																	
1500 (F600 Ford)	13000	(z)	2400	8.25/20	50–50	.....	48½	Ford	D	.....	FH	CA	15x4	251	2	53x2½	2⅝
1500 (Chevrolet)	13000	(z)	2400	9.00/20	50–50	.....	48½	Chev.	D	.....	CH	CA	15x4	251	2	53x2½	2⅝
1500 (All other makes)	13000	(z)	2400	8.25/20	50–50	.....	48½	Match	D	.....	Match	CA	Match	(z)	2	53x2½	(z)
1550 (F700 Ford)	15000	(z)	2600	9.00/20	50–50	.....	48½	Ford	D	.....	FH	CA	15x5	312	2	53x2½	3
1550 (All other makes)	15000	(z)	2600	9.00/20	50–50	.....	48½	Match	D	.....	Match	CA	Match	(z)	2	53x2½	(z)
2000 (F750 Ford)	15000	(z)	3200	10.00/20	50–50	.....	48½	Ford	D	.....	FH	CA	15x5	312	2	56x3	3
2000 (F800 Ford)	17000	(z)	3600	10.00/20	50–50	.....	48½	Ford	D	.....	HorA	CA	16x5	(z)	2	56x3	3
2000 (All other makes)	20000	(z)	4000	11.00/20	50–50	.....	48½	Match	D	.....	HorA	CA	Var	(z)	2	56x3	(z)
2400 (F900 Ford)	21000	(z)	4000	11.00/22	50–50	.....	48½	Ford	D	.....	HorA	CA	16x6	370	2	56x3	(z)
2400 (F900 Ford)	21000	(z)	4000	11.00/22	50–50	.....	52	Ford	D	.....	HorA	CA	16x6	370	2	60x3	(z)
THORNTON DRIVE																	
A3C26 Chev. 1½ ton	11250	.....	3200	8.25/20	50–50	.....	48	Chev.	D	3½	VH	CA	15x4	251	2	48x2½	2⅝
AYC30 Chev. 2 ton	13000	.....	3300	8.25/20	50–50	.....	48	Chev.	D	4	VH	CA	15x4	251	2	48x2½	2⅝
A2C30 Chev. 2 ton	13000	.....	3300	8.25/20	50–50	.....	48	Eat	D	4¼	VH	CA	15x4	251	2	48x2½	2⅝
A9D30 Dodge FA, HA, JA	13000	.....	3300	8.25/20	50–50	.....	48	Dodge	D	4¼	VH	CA	16x3	251	2	48x2½	2 11/16
A2 Various	13000	.....	3300	8.25/20	50–50	.....	48	Eat	D	4¼	VH	CA	15x4	251	2	48x2½	2⅝
A2F30 Ford F500 & F600	13000	.....	3300	8.25/20	50–50	.....	48	Ford	D	4⅜	VH	CA	15x4	251	2	48x2½	2⅝
A6F32 Ford F600	14000	.....	3600	9.00/20	50–50	.....	52⅛	Eat	D	4½	VH	CA	15x4	251	2	48x2½	3
A6F36 Ford F700 & F750	14000	.....	3600	9.00/20	50–50	.....	52⅝	Eat	D	4½	VH	CA	15x4	251	2	48x2½	3
A6 Various	14000	.....	3600	9.00/20	50–50	.....	52⅝	Eat	D	4½	VH	CA	15x4	251	2	48x2½	3
A6035	14000	.....	3600	9.00/20	50–50	.....	52⅝	Eat	D	4½	VH	CA	16x3	251	2	48x2½	3
A15F40 Ford F750	17000	.....	3700	10.00/20	50–50	.....	52⅝	Ford	D	5⅛	VH or A	CA	16x5	345	2	48x2½	3¼
A15F41 Ford F800	17000	.....	3700	10.00/20	50–50	.....	52⅝	Ford	D	5⅛	VH or A	CA	16x5	345	2	48x2½	3¼
A15 Various	17000	.....	3700	10.00/20	50–50	.....	52⅝	Eat	D	5⅛	VH or A	CA	16x5	345	2	48x2½	3¼
A14F41 Ford F800	17000	.....	3800	10.00/20	50–50	.....	52⅝	Ford	D	5⅛	VH or A	CA	16x5	345	2	48x2½	3¼
A14 Various	17000	.....	3800	10.00/20	50–50	.....	52⅝	Eat	D	5⅛	VH or A	CA	16x5	345	2	48x2½	3¼

Third Axle Specifications

THIRD AXLE MAKE AND MODEL and Truck Model Adapted to	Capacity (Lb.) See Explanatory Notes	Price (f. o. b. factory)	Weight (Lb.) with Max. Tires, Frame Extension, Etc.	Maximum Tire Size	LOAD DISTRIBUTION RANGE (First figure or combination applies to center axle; second figure to third axle)		Axle Spacing (in inches) (with maximum tires)	AXLE DATA			BRAKES (Standard)				Number of Points of Frame Support	Spring Size or Number Leaves Added	Spindle Diameter (at inner bearing)
								Make	Type	Size	Make and Type	Drum Material	Brake Diameter and Width	Lining Area			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
TRUCKSTELL																	
300 Ford F500	11000	....	.....	8.25/20	50–50	.....	48½	Ford	D	3½–3½	VFH	CA	14½x3½	.....	2	65x2½	2⅝
300 Ford F600	13000	....	.....	8.25/20	50–50	.....	48½	Ford	D	3½–4¼	VFH	CA	15x4	.....	2	65x2½	2⅝
300 Chevrolet	13000	....	.....	8.25/20	50–50	.....	48½	Chev.	D	4	VCH	CA	15x4	251	2	65x2½	2⅝
300 Dodge B4J	13500	....	.....	8.25/20	50–50	.....	48½	Dodge	D	4¼	VDH	C	15x4	252	2	65x2½	.....
400 Ford F700 & F750	15000	....	.....	9.00/20	50–50	.....	48½	Ford	D	4¼	VFH	CA	15x5	312	2	60x3	3
400 Dodge B4K	15000	....	.....	9.00/20	50–50	.....	48½	Dodge	D	Re	VDH	C	.....	252	2	60x3	.....
500 Dodge B4R	15000	....	.....	9.00/20	50–50	.....	48½	Dodge	D	Re	VDH	C	16½x3½	217	2	60x3	.....
500 Ford F800	17000	....	.....	10.00/20	50–50	.....	48½	Ford	D	5⅛	VFH or A	CA	16x5(1)	Var	2	60x3	3¼
500 Dodge B4T	17000	....	.....	10.00/20	50–50	.....	48½	Dodge	D	Re	VDH or A	C	16½x4(2)	Var	2	60x3	.....
500 Ford F900	21000	....	.....	10.00/20	50–50	.....	48½	Ford	D	5⅛	VFH or A	CA	16x6(3)	Var	2	60x3	3¼
Trailer Suspensions																	
HOOBLER																	
AT-48 (Note 1)	48000	‡‡	6100	11.00/22	50–50	.....	109¾	Note 1	Note 1	Var	Var	Var	Var	Var	2	42x4	Var
HUTCHENS																	
H100, H200 (all makes)	16000–20000	Var	2500	12.00/24	50–50	55–45	50	Var	Var	.....	.....	.....	.....	.....	6	44x3	.....
SUPER LOAD BOOSTER (Note 2)																	
NEWAY (Tandem)																	
334	34000	....	.....	12.00/20	50–50	.....	48–49	Var	Var	Var	Var	Var	Var	Var	2	.....	Var
336	36000	....	.....	12.00/20	50–50	.....	48–49	Var	Var	Var	Var	Var	Var	Var	2	.....	Var
402	44000	....	.....	12.00/20	50–50	.....	48–51	Var	Var	Var	Var	Var	Var	Var	2	.....	Var
836	36000	....	.....	12.00/20	50–50	.....	50½–51½	Var	Var	Var	Var	Var	Var	Var	2	.....	Var
842	42000	....	.....	12.00/24	50–50	.....	50½–53⅜	Var	Var	Var	Var	Var	Var	Var	2	.....	Var
846	46000	....	.....	12.00/24	50–50	.....	50½–53⅜	Var	Var	Var	Var	Var	Var	Var	2	.....	Var
861	60000	....	.....	12.00/24	50–50	.....	54	Var	Var	Var	Var	Var	Var	Var	2	.....	Var
NN-900S	40000	....	.....	11.00/22	50–50	.....	110	Var	Var	Var	Var	Var	Var	Var	4	.....	Var
WB-40	40000	....	.....	Var	50–50	.....	Var	Var	Var	Var	Var	Var	Var	Var	2	.....	Var
WB-50	50000	....	.....	Var	50–50	.....	Var	Var	Var	Var	Var	Var	Var	Var	2	.....	Var
WB-60	60000	....	.....	Var	50–50	.....	Var	Var	Var	Var	Var	Var	Var	Var	2	.....	Var
WB-70	70000	....	.....	Var	50–50	.....	Var	Var	Var	Var	Var	Var	Var	Var	2	.....	Var
REYCO																	
17114-1 (Single)	14000	‡‡	415	11.00/22	.....	.....	.....	Var	Var	Var	Var	Var	Var	Var	4	43¼x3	.....
17118-1 (Single)	18000	‡‡	443	11.00/22	.....	.....	.....	Var	Var	Var	Var	Var	Var	Var	4	43¼x3	.....
17118-1 US (Single for Low Boy Trailers)	18000	‡‡	453	10.00/15	.....	.....	.....	Var	Var	Var	Var	Var	Var	Var	4	43¼x3	.....
17122-1 (Single)	22000	‡‡	517	11.00/22	.....	.....	.....	Var	Var	Var	Var	Var	Var	Var	4	51¾x3	.....
1300-25 (Single)	25000	‡‡	565	11.00/22	.....	.....	.....	Var	Var	Var	Var	Var	Var	Var	4	44x3	.....
17214-1 (Tandem)	28000	‡‡	881	11.00/22	50–50	52–48	50¾	Var	Var	Var	Var	Var	Var	Var	6	43¼x3	.....
17218-1 (Tandem)	36000	‡‡	937	11.00/22	50–50	52–48	50¾	Var	Var	Var	Var	Var	Var	Var	6	43¼x3	.....
17218-1 US (Tandem for Low Boy Trailers)	36000	‡‡	957	10.00/15	50–50	52–48	50¾	Var	Var	Var	Var	Var	Var	Var	6	43¼x3	.....
1100 (Tandem)	38000	‡‡	1020	11.00/22	50–50	55–45	50	Var	Var	Var	Var	Var	Var	Var	6	43½x3	.....
17222-1 (Tandem)	44000	‡‡	1077	11.00/22	50–50	52–48	50¾	Var	Var	Var	Var	Var	Var	Var	6	43¼x3	.....
SIX WHEELS INC.																	
2-15	26000	....	2300	8.25/20	50–50	.....	45	Var	T	4½	Var	Var	Var	Var	1	45x3½	Var
2-15	26000	....	2300	9.00/20	50–50	.....	45	Var	T	4½	Var	Var	Var	Var	1	45x3½	Var
2-15	26000	....	2300	10.00/20	50–50	.....	45	Var	T	4½	Var	Var	Var	Var	1	45x3½	Var
2-15	32000	....	2450	9.00/20	50–50	.....	45	Var	T	4½	Var	Var	Var	Var	1	45x3½	Var
2-15	32000	....	2450	10.00/20	50–50	.....	45	Var	T	4½	Var	Var	Var	Var	1	45x3½	Var
2-20	36000	....	2600	10.00/20	50–50	.....	48	Var	T	5	Var	Var	Var	Var	1	48x3½	Var
2-20	36000	....	2600	10.00/22	50–50	.....	48	Var	T	5	Var	Var	Var	Var	1	48x3½	Var
2-20	50000	....	2850	10.00/22	50–50	.....	48	Var	T	5	Var	Var	Var	Var	1	48x3½	Var
2-20	50000	....	2850	10.00/22	50–50	.....	48	Var	T	5	Var	Var	Var	Var	1	48x3½	Var
2-20	50000	....	2850	11.00/20	50–50	.....	48	Var	T	5	Var	Var	Var	Var	1	48x3½	Var
2-20	50000	....	2850	11.00/22	50–50	.....	48	Var	T	5	Var	Var	Var	Var	1	48x3½	Var
TRUCKTOR																	
T-11 (Single)	11000	‡‡	2000	8.25/20	.....	.....	.....	Own	Sr	3	LHV	CA	16x3½	236	4	56	.....
T-14 (Single)	14000	‡‡	2300	9.00/20	.....	.....	.....	Own	Sr	3¼	LHV	CA	17¼x4	251	4	56	.....
T-16 (Single)	16000	‡‡	2600	10.00/20	.....	.....	.....	Tim	T	5	MA	CA	16½x6	438	4	56	.....
T-18 (Single)	18000	‡‡	2750	11.00/20	.....	.....	.....	Tim	T	5	MA	CA	16½x7	512	4	56	.....
T-20 (Single)	20000	‡‡	2900	11.00/22	.....	.....	.....	Tim	T	5½	MA	CA	18x7	450	4	56	.....
T-25 (Single)	25000	‡‡	3750	12.00/24	.....	.....	.....	Own-Tim	Opt	6	MA	CA	18x7	450	4	56	.....
TT-14 (Tandem)	28000	‡‡	4800	9.00/20	50–50	.....	48	Own	Sr	3	MA	CA	17¼x4	251	6	45½	.....
TT-16 (Tandem)	32000	‡‡	4600	10.00/20	50–50	.....	50	Tim	T	5	MA	CA	16½x6	438	6	46¼	.....
TT-16	32000	‡‡	.....	9.00/20	50–50	.....	50	Tim	T	5½	MA	CA	18x7	450	Ge	neral Air Sp	ring
TT-16	32000	‡‡	.....	10.00/20	50–50	.....	50	Tim	T	5½	MA	CA	18x7	450	Ge	neral Air Sp	ring
TT-18 (Tandem)	36000	‡‡	5200	11.00/20	50–50	.....	50	Tim	T	5	MA	CA	16½x7	512	6	46¼	.....
TRUXMORE (y) Tandem Conversions																	
280	12000	‡‡	2400	8.25/20	51–49	62–38	44½–48	Own	Sq	2¾	H	CA	15x3½	200	4	**	2⅜
340 (Standard)	14000	‡‡	2700	9.00/20	50–50	58–42	47–48	Own	Sq	3	H	CA	16x3½	210	4	**	2⅜
340HT (Hi-tork brake)	14000	‡‡	2750	9.00/20	50–50	58–42	47–48	Own	Sq	3	H	CA	16x5	340	4	**	2⅜
340A (Air brake)	14000	‡‡	2800	9.00/20	50–50	58–42	47–48	Own	Sq	3	MW	CA	16½x4	305	4	**	2⅜
340AT	16000	‡‡	.....	10.00/20	50–50	58–42	48–49	Own	Sq	3¼	MW	CA	16½x5	380	4	**	3⅛
400 (Hi-tork Hyd. brake)	16000	‡‡	3100	10.00/22	51–49	60–40	48–49	Own	Sq	3¼	H	CA	16x5	340	4	**	3⅛
400 (Oversize brake)	16000	‡‡	3150	10.00/22	51–49	60–40	48–49	Own	Sq	3¼	H	CA	16x6	410	4	**	3⅛
400A (Air brake)	16000	‡‡	3200	10.00/22	51–49	60–40	48–49	Own	Sq	3¼	MW	CA	16½x5	380	4	**	3⅛
450 (Hi-tork Hyd. brake)	18000	‡‡	3400	11.00/22	51–49	60–40	49–50	Own	Sq	3¼–3½	H	CA	16x6	410	4	**	3¼
450A (Air brake)	18000	‡‡	3450	11.00/22	51–49	60–40	49–50	Own	Sq	3¼–3½	MW	CA	16½x6	455	4	**	3¼
50H (Hyd. brake)	20000	‡‡	3800	11.00/24	50–50	65–35	49–53	Own	Sq	3½	H	CA	17¼x5	360	4	**	3⅜
50A (Air brake)	20000	‡‡	3850	11.00/24	50–50	65–35	49–53	Own	Sq	3½	MW	CA	17¼x5½	410	4	**	3⅜

100,000 MILES WITH MOTORS UNTOUCHED USING CITIES SERVICE C-800 MOTOR OIL!

CONSTANTLY ON THE MOVE. Fleming delivers local and long distance for Pep Boys, one of the largest automotive supply houses in the East.

75,000 GALLONS OF CITIES SERVICE GASOLENE power Fleming trucks through the year. They find it's the best for mileage, power and economy.

Ten Fleming Tractors Pass The 100,000-Mile Mark With Heads, Pans, Wheel Bearings And Motors Untouched!

Of course, you expect a high-quality tractor to give you long-range trouble-free performance, but when you can get by the 100,000-mile mark without a bit of trouble with any of the "hot spots"... you're getting a lot of help from somewhere!

AND THAT'S HOW THE FLEMING PEOPLE FIGURE IT! They say, "A great deal of this success is due to using your C-800 Motor Oil, your Trojan A Greases and Cities Service Regular Gasolene. With 10 tractors, 12 trailers, you can readily see that operating economy is a must with us. With Cities Service Products, our operating costs have gone down and we're really happy."

MR. FLEET OWNER: Try the complete Cities Service line for your trucks or busses and enjoy a big operating savings. Call your nearest Cities Service office or write Cities Service Oil Co., Sixty Wall Tower, New York 5, New York.

CITIES SERVICE

QUALITY PETROLEUM PRODUCTS

Traction Test Facts

This stop and go traction data was developed by the National Safety Council Committee on Winter Driving Hazards during recent braking tests over various road conditions. Stopping distances for trucks equipped with various safety devices are shown in the second column. The percentages in the third column represent the maximum grade that can be climbed by a vehicle equipped as indicated when the road is covered with glare ice or hard packed snow. Note: A one hundred per cent grade is equivalent to a rise of one foot for every hundred feet of travel.

	Stopping Distance in Feet from 20 mph	*Traction in Per Cent Gradeability*
Glare Ice at 20 F		
Conventional tires	209	3%
Winterized mud-snow tires	190	4%
Unit chains	160	11%
Sanders	134	13%
Regular tire chains	130	12%
Regular dual chains	98	18%
Reinforced single chains	91	20%
Hard Packed Snow		
Conventional tires	62	6%
Winterized mud-snow tires	51	8%
Reinforced single tire chains	38	24%
Dry Concrete		
Conventional tires	21	

Truck Tire Data

Showing ply ratings, dual spacing, maximum pressures, maximum load, revolutions per mile, advanced and interim rim recommendations

Tire Size	Ply Rating	Advanced Rim Recommended Permissible	Interim Rim Recommended Permissible	Maximum Pressure (lb)	Maximum Load (lb)	Minimum Dual Spacing		Tube Size	Flap	Approximate* Revolutions Per Mile
						With Chain	Without Chain			
6.50-17	6	5.0	.....	50	1500	9.0	8.4	6.50-17W	17-K	675
6.50-18	6	5.0	.....	50	1575	9.0	8.4	6.50-18W	18-K	.....
6.50-20	6	5.0	5.00R	50	1700	9.0	8.4	6.50-20W	20-K	610
7.00-17	8	5.5	5.50S	55	1775	9.7	9.0	7.00-17W	17-M	651
		5.0	5.00R			9.5	8.8			
7.00-18	8	5.5	5.50S	55	1800	9.7	9.0	7.00-18W	18-M	630
		5.0	5.00R			9.5	8.8			
7.00-20	8	5.5	5.50S	55	2000	9.7	9.0	7.00-20W	20-M	596
		5.0	5.00R			9.5	8.8			
7.50-17	6	6.0	6.00S	60	2100	10.3	9.6	7.50-17W	17-M	637
		5.5	5.50S			10.1	9.4			
7.50-18	8	6.0	6.00S	60	2200	10.3	9.6	7.50-18W	19-M	617
		5.5	5.50S			10.1	9.4			
7.50-20	8	6.0	6.00S	60	2375	10.3	9.6	7.50-20W	20-M	580
		5.5	5.50S			10.1	9.4			
8.25-17	10	6.5	6.50T	65	2600	11.2	10.4	8.25-17W	17-M	.....
		6.0	6.00S			11.0	10.2			
8.25-18	10	6.5	6.50T	65	2675	11.2	10.4	8.25-18W	18-M	570
		6.0	6.00S			11.0	10.2			
8.25-20	10	6.5	6.50T	65	2900	11.2	10.4	8.25-20W	20-M	553
		6.0	6.00S			11.0	10.2			
9.00-18	10	7.0	7.00T	65	3225	12.2	11.4	9.00-18W	18-N	559
		6.5	6.50T			12.0	11.2			
9.00-20	10	7.0	7.00T	65	3450	12.2	11.4	9.00-20W	20-N	530
		6.5	6.50T			12.0	11.2			
10.00-18	12	7.5	7.50V	70	3775	13.1	12.2	10.00-18W	18-R	544
		7.0	7.00T			12.9	12.0			
10.00-20	12	7.5	7.50V	70	4000	13.1	12.2	10.00-20W	20-R	515
		7.0	7.00T			12.9	12.0			
10.00-22	12	7.5	7.50V	70	4275	13.1	12.2	10.00-22W	22-R	489
		7.0	7.00T			12.9	12.0			
10.00-24	12	7.5	7.50V	70	4550	13.1	12.2	10.00-24W	24-R	468
		7.0	7.00T			12.9	12.0			
11.00-20	12	8.0	8.00V	70	4500	13.8	12.8	11.00-20W	20-R	494
		7.5	7.50V			13.6	12.6			
11.00-24	12	8.0	8.00V	70	4750	13.8	12.8	11.00-22W	22-R	480
		7.5	7.50V			13.6	12.6			
11.00-24	12	8.0	8.00V	70	5000	13.8	12.8	11.00-24W	24-R	450
		7.5	7.50V			13.6	12.6			
12.00-20	14	8.5	8.50V	75	5275	14.6	13.6	12.00-20W	20-R	482
		8.0	8.00V			14.4	13.4			
12.00-22	14	8.5	8.50V	75	5600	14.6	13.6	12.00-22W	22-R	460
		8.0	8.00V			14.4	13.4			
12.00-24	14	8.5	8.50V	75	5925	14.6	13.6	12.00-24W	24-R	441
		8.0	8.00V			14.4	13.4			
13.00-20	16	9.0	9.00V	75	6275	15.9	14.9	13.00-20W	20-V	473
		8.5	8.50V			15.6	14.6			
13.00-24	16	9.0	9.00V	75	7025	15.9	14.9	13.00-24W	24-V	422
		8.5	8.50V			15.6	14.6			
14.00-20	18	10.0	9.00V (a)	80	7650	17.3	16.2	14.00-20W	20-V	437
		9.0	.....			16.9	15.8			
14.00-24	18	10.0	9.00V (a)	80	8525	17.3	16.2	14.00-24W	24-V	403
		9.0	.....			16.9	15.8			

*—For an accurate formula used in figuring revolutions per mile, see p. 135.
(a)—Dual spacing with chain—16.9; without chain—15.8. Disregard columns 7 and 8.

Data excerpted from Tire & Rim Association, Inc. Yearbook.

STEEL-VENT'S 2-WAY ACTION DOES IT!

1 EXTRA OIL-CARRYING CAPACITY puts more oil on cylinder walls—for extra lubrication in the wear zone.

2 EXTRA OIL-DRAINING CAPACITY lets excess oil drain back into the crankcase—controls oil pumping.

Two-Way oil control permits the right amount of oil to circulate the split-second it's needed to protect vital friction zones. The Steel-Vent is designed to meter a generous amount of lubrication up to the compression ring wear zone—holding wear to the absolute minimum.

And Steel-Vents can't clog—with every stroke of the piston, Steel-Vents flush away all carbon deposits. You'll never see a clogged Steel-Vent.

In hundreds of thousands of re-ring, re-bore and re-sleeve installations, Hastings Steel-Vent Piston Rings have proved they reduce cylinder wear and stop oil pumping.

HASTINGS

STEEL-VENT PISTON RINGS

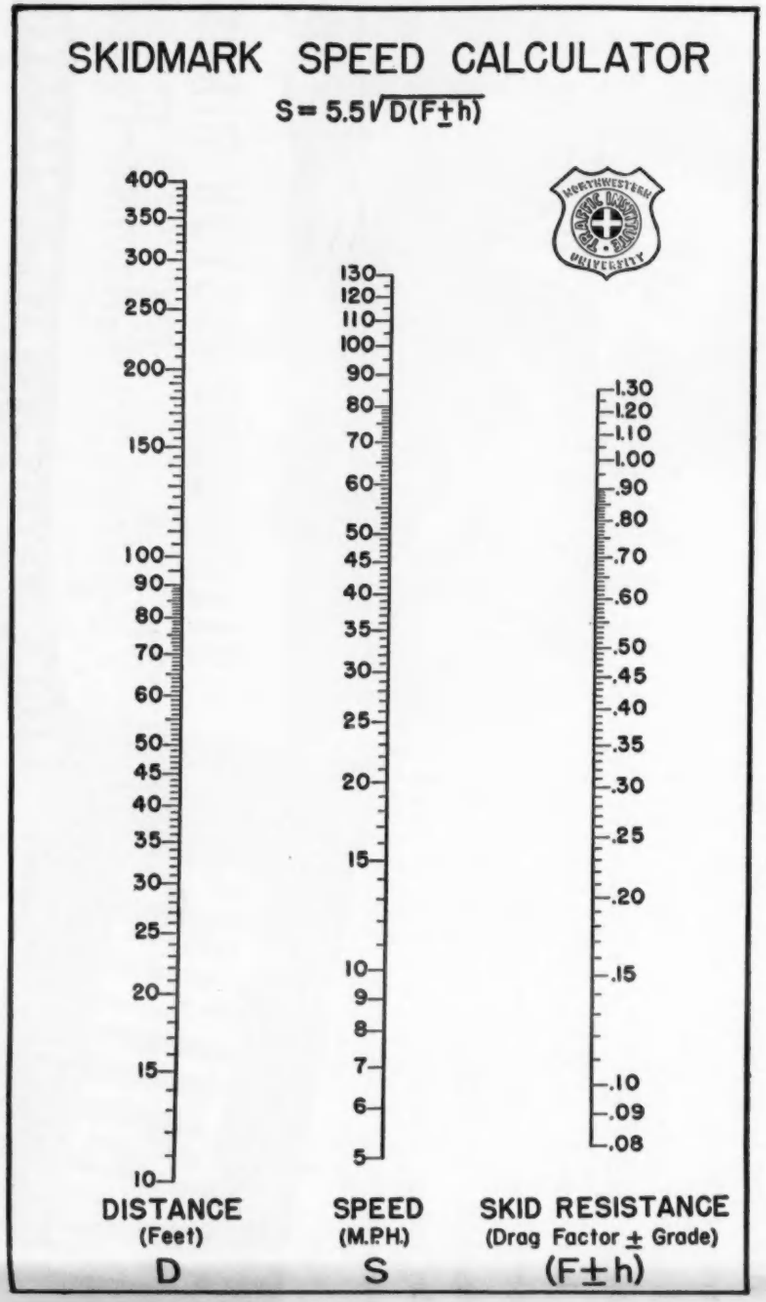
Regular or Chrome-Faced

REDUCE CYLINDER WEAR · CONTROL OIL

HASTINGS MANUFACTURING COMPANY, HASTINGS, MICH. • HASTINGS LTD., TORONTO

Piston Rings, Casite, Caslube, Drout, Oil Filters, Spark Plugs

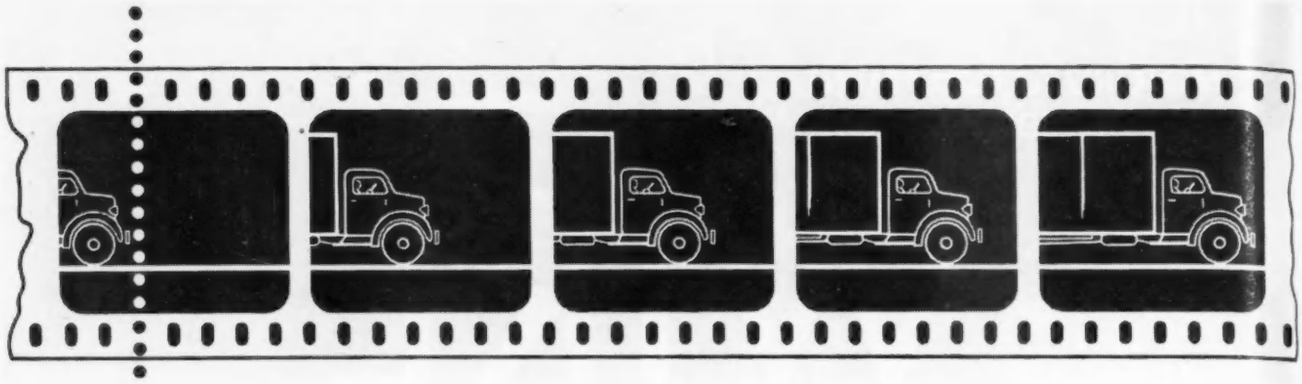
Skidmark Speed Calculator



Speed Estimator

To use: To determine the speed which produced a set of skid marks, total the length of all skid marks and divide by the number of wheels on the vehicle. This will give you a distance in feet which you will note in the column marked "D." Next determine the type of road surface and match it as nearly as possible with the column marked "F." Lay a straightedge between the distance you have determined in column "D" and the road surface you have located in column "F." The point at which the straightedge crosses column "S" will indicate the speed at which the vehicle was traveling. Chart below shows possible ranges of pavement drag factor for rubber tires. Source: The Traffic Institute, Northwestern University.

DESCRIPTION OF ROAD SURFACE	DRY				WET			
	Less Than 30 m.p.h.		More Than 30 m.p.h.		Less Than 30 m.p.h.		More Than 30 m.p.h.	
	From	To	From	To	From	To	From	To
Concrete								
New, Sharp	.80	1.00	.70	.85	.50	.80	.40	.75
Travelled	.60	.80	.60	.75	.45	.70	.45	.65
Traffic Polished	.55	.75	.50	.65	.45	.65	.45	.60
Asphalt or Tar								
New, Sharp	.80	1.00	.65	.70	.50	.80	.45	.75
Travelled	.60	.80	.55	.70	.45	.70	.40	.65
Traffic Polished	.55	.75	.45	.65	.45	.65	.40	.60
Excess Tar	.50	.60	.35	.60	.30	.60	.25	.55
Brick								
New, Sharp	.75	.95	.60	.85	.50	.75	.45	.70
Traffic Polished	.60	.80	.55	.75	.40	.70	.40	.60
Stone Block								
New, Sharp	.75	1.00	.70	.90	.65	.90	.60	.85
Traffic Polished	.50	.70	.45	.65	.30	.50	.25	.50
Gravel								
Packed, Oiled	.55	.85	.50	.80	.40	.80	.40	.60
Loose	.40	.70	.40	.70	.45	.75	.45	.75
Cinders								
Packed	.50	.70	.50	.70	.65	.75	.65	.75
Rock								
Crushed	.55	.75	.55	.75	.55	.75	.55	.75
Ice								
Smooth	.10	.25	.07	.20	.05	.10	.05	.10
Show								
Packed	.30	.55	.35	.35	.30	.60	.30	.60
Loose	.10	.25	.10	.20	.30	.60	.30	.60
Metal Grid								
Open	.70	.90	.55	.75	.25	.45	.20	.35



Selected Fleet Films

A list of 16 mm films designed to cut mechanic training time, improve driver and shop safety, increase public understanding of the industry's importance

THIS list of 16 mm films has been carefully selected to help truck and bus fleet operators cut mechanic training time, improve driver and shop safety, and increase public understanding of the industry's importance. It represents a consolidation and complete revision of the lists published in February, March and May last year.

For your convenience, it has been divided into three sections: (1) Maintenance—see below, (2) Safety—page 198, and (3) Public relations—page 210. Maintenance supervisors and safety directors should consider use of films listed in the Public Relations section as a means to obtain employee understanding of the importance of their part in the highway transportation industry. Increased efficiency can result from high morale and pride in the job being done when these films are shown.

Most of these films are available for your use without cost—you pay only transportation and insurance. Others carry a nominal rental charge. Projectors for showing them, if not otherwise obtainable, can usually be rented in any city at low cost. Because of demand, films should be ordered as far in advance as possible. Films in this list are sound films unless otherwise indicated and *should never be shown in silent type projector* as it destroys the sound track.

In each section, films are arranged alphabetically by title under an appropriate sub-heading. Following the title is the running time, a brief description of the film, whether free loan or rental, and a numerical reference to the source list beginning on page 216. Where more than one source is given, it is generally advisable to write to the closest address.

MAINTENANCE FILMS

THIS list of maintenance training films will provide effective and efficient instruction for mechanics in bus and truck fleet shops. The step-by-step procedures and the basic background material provided in the films will ideally supplement other instruction, save you time and money in the long run. Arrangement of the films in this section is as follows:

1. Gasoline Engines
2. Diesel Engines
3. Gas Turbine Engines
4. Ignition, Electrical Systems
5. Brakes
6. Bearings
7. Lubrication
8. General Maintenance
9. Welding
10. Handling Aluminum

Gasoline Engines

The ABC of Internal Combustion—13 min—Animated, color film explaining basic principles of internal combustion engines. Free loan—30.

The ABC of the Automobile Engine—18 min—Animated, color film describing in detail parts and workings of internal combustion engines. Follow-up film to "The ABC of Internal Combustion." Free loan—30.

Flames of Progress—11 min—Shows actual combustion in a gasoline engine and demonstrates engine knock using a special transparent cylinder head. Free loan—24.

The Power Within—20 min—Describes the creation of power in the automobile internal combustion engine, illustrating the operation of each part, and explains how power is transmitted to the rear wheels. Free loan—72.

(TURN TO PAGE 192, PLEASE)

APPROVED for leading NATIONAL FLEETS

Sherwin-Williams KEM Transport Enamels are approved and recommended finishes for the fleet equipment of many leading national fleet operators such as the Goodyear Tire & Rubber Company, The Coca-Cola Company, Dad's Root Beer Co., Allied Van Lines, Gray Line Sight-Seeing Tours, City Products Company, Pepsi-Cola Company and many others.

"BEST-KNOWN NAME IN FINISHES"

helps sell service for the

"GREATEST NAME IN RUBBER"

When your business runs on wheels, smart-looking equipment is just good sense. It comes down to the important fact that, to keep trucks attractive and sales inviting . . . with a minimum of repaints . . . you need the toughest available finishes.

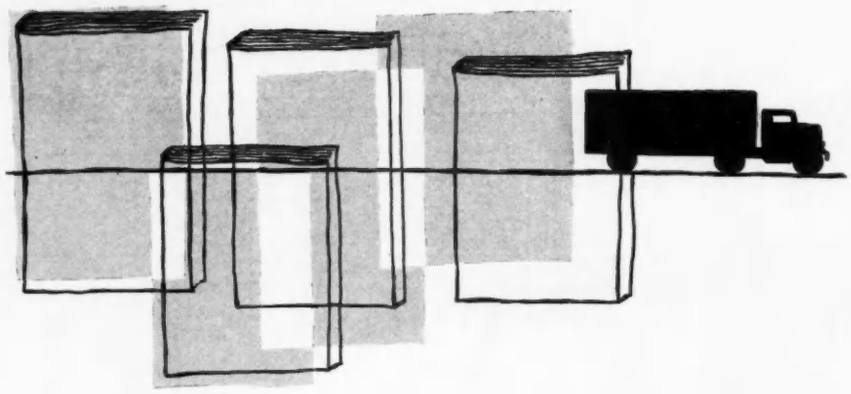
That's why KEM® Transport Enamels are approved and specified by so many leading operators of fleet equipment. For example, the Goodyear Tire & Rubber Company—long a leading name in rubber. They've found that these long-lasting, fast-drying, dirt and chemical-resistant finishes short-cut time out for refinishing and keep equipment out of the paint shop longer. It all adds up to real cash savings.

KEM Transport Enamels are specially designed to resist effects of heat, cold, moisture, abrasion, grease, gasoline and rough handling. They represent the highest type of synthetic formulation developed by Sherwin-Williams Research Laboratories.

Try KEM Transport Enamels on your next refinishing job. They're available through your nearby Sherwin-Williams "OK" Automotive Jobber. Or write for name of distributor nearest you. The Sherwin-Williams Co., Automotive Division, Cleveland 1, Ohio.

SHERWIN-WILLIAMS

AUTOMOTIVE FINISHES



Selected Maintenance Manuals

This selected list of maintenance literature contains valuable information for those responsible for the repair and service of equipment. The following pages contain brief descriptions of manuals, folders, charts and booklets on a variety of specific subjects. Many are provided free of charge. Some of the more complete publications are available at a nominal charge. Addresses of the manufacturers offering them are given here for your convenience in ordering. Note that this literature has been grouped under general headings:Axles Springs, Wheels; Brakes; Cooling System; Clutches, Transmissions; Electrical, Ignition; Engines; Fuel Systems; Fuels, Lubricants; Tires; and Tools and Equipment.

Axles, Springs, Wheels

Timken-Detroit Field Service Bulletins—Various bulletins describing assembly, maintenance, lubrication, brake service, etc., on various Timken-Detroit axles. Requests should include information desired and model number of unit. Free—Technical Publications Manager, Service Engineering Dept., Timken-Detroit Axle Division, Rockwell Spring and Axle Co., Detroit 32, Mich.

Timken Wall Chart—Illustrates and describes adjustment and assembly of Timken-Detroit hypoid helical two-speed, double-reduction drive units. Free-address as above.

Eaton Handbooks—Various bulletins describing service and maintenance procedure on Eaton two-speed axles, two-speed axles with electric shift controls, Model No. 36M tandem-drive axles, electric shift for Timken two-speed axles. Requests should indicate information desired and model number of unit. Free—Sales Promotion Manager, Axle Division, Eaton Mfg. Co., Cleveland 10, Ohio.

Tips on Spring Service and Inspection—29 pages—Covers leaf spring technical data briefly, including construction, lubrication, adjustment and maintenance. Each 25¢—Leaf Spring Institute, 2100 Keith Bldg., Cleveland 15, Ohio.

Truck Rim Identification and Operating Manual 39 pages—Illustrates and describes various types of truck wheel rims and dual wheel construction. Includes tire mounting and demounting instructions with a special section on rim accidents. Free—from members of the National Wheel and Rim Assn. For name of closest member, write the association at 208 West St. Clair Ave., Cleveland 13, Ohio.

Bear Wheel Alinement, Axle and Frame Straightening Service—approx. 160 pages—Illustrates and describes Bear wheel alinement, including data on various types of suspensions, wheel balancing and steering system adjustment. Procedures and equipment for axle and frame straighening are illustrated and described. Each $2.00—Bear Mfg. Co., Rock Island, Ill.

Weaver Course in Wheel Alinement—159 pages—Describes and fully illustrates service and maintenance procedures for proper wheel alignement. Sections also are included on tire alinement, axle straightening, wheel balancing and steering mechanism adjustment. Each about $1.00—Sales Department, Weaver Mfg. Co., Springfield, Ill.

Bean Wheel Alinement Specifications—Charts giving wheel alinement specifications. Include model number of vehicle when requesting information. Free—Automotive Dept., John Bean Division, Food Machinery and Chemical Corp., Box 840, Lansing 4, Mich.

Brakes

Bendix-Westinghouse Brake Maintenance Manual—224 pages—Complete description of Bendix-Westinghouse Air Brake System, including assembly, service and maintenance procedures. Each $1.00—Advertising Dept., Bendix-Westinghouse Automotive Air Brake Co., Elyria, Ohio.

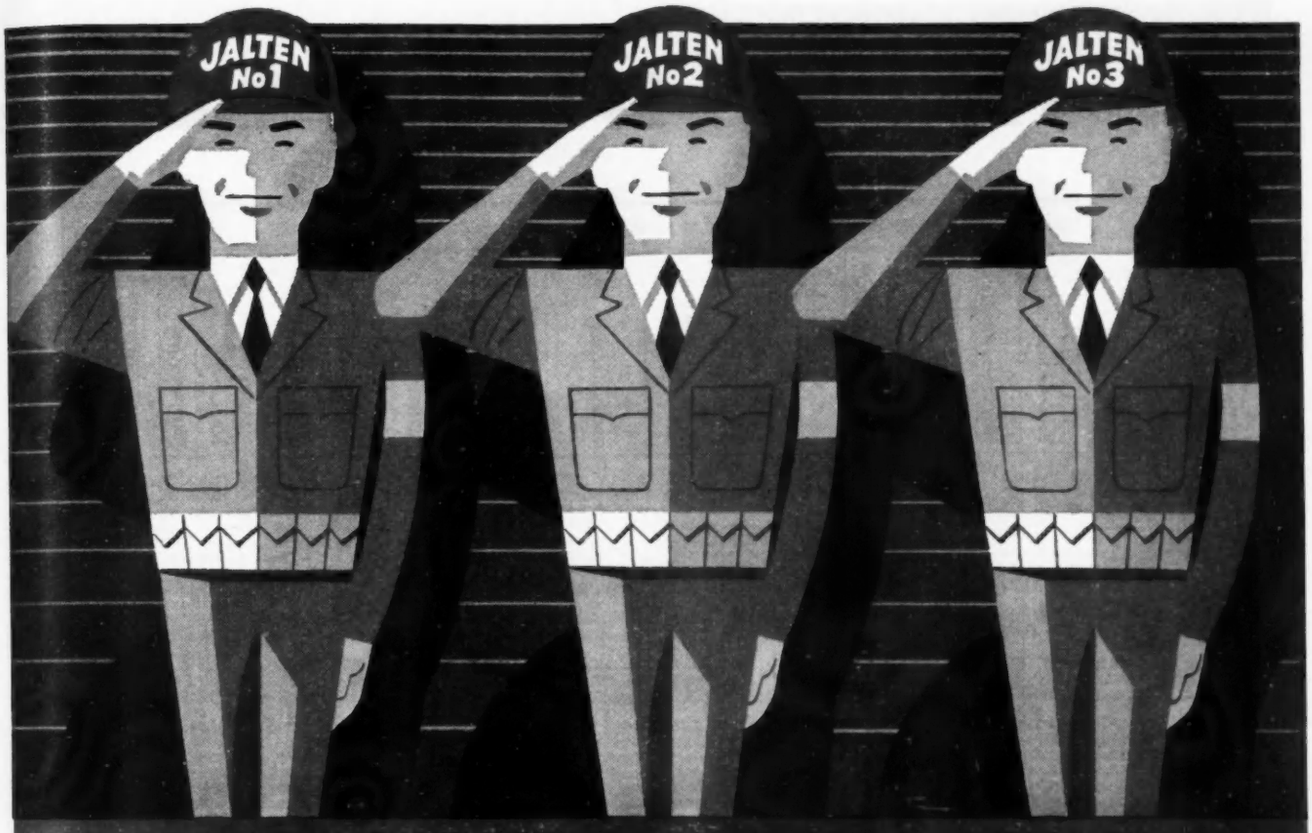
Operation and Maintenance Instructions Bendix-Westinghouse Air Brake Equipment—Folder briefly describing maintenance and operation of Bendix-Westinghouse air brake. Free—address as above.

Fundamentals of Brakes, No. 5059—Folder describing basic physical forces in braking of vehicles, including coefficient of friction, transfer of motion energy to heat energy, effect of horsepower, weight and speed on braking, stopping distances, leverage and deceleration. Free—address as above.

Delco Brake Service Manual—Covers brake servce, maintenance and care of Delco brakes. Free—Merchandising Manager, Delco Brakes, United Motors Service, Division of General Motors Corp., General Motors Bldg., Detroit 2, Mich.

Grey-Rock Brake Service Manual—56 pages—Description of parts and operation of major brake systems and makes. Includes assembly, service and maintenance procedures for brakes and related components. Each $2.50—Advertising Dept., Grey Rock Division, Raybestos-Manhatten, Inc., Manheim, Pa.

(TURN TO PAGE 260, PLEASE)



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1954 BUS SPECIFICATIONS—

Line Number	BUS MAKE AND MODEL	GENERAL: Passenger Rating	GENERAL: Type (City Service, Parlor, etc.)	GENERAL: Standard Wheelbase (In.)	GENERAL: Overall Length (In.)—Bumper to Bumper	GENERAL: Inside Length (In.)—Passenger Compartment	GENERAL: Tread (In.)—Front and Rear	GENERAL: Complete Vehicle Weight—Dry (Lb.)	GENERAL: Standard Tire Size (In.)—Front and Rear	ENGINE: Make and Model	ENGINE: Cycle and Fuel	ENGINE: Location	ENGINE: Number of Cylinders—Bore and Stroke (In.)	ENGINE: Displacement (Cu. In.)	ENGINE: Rated Horsepower (A.M.A.)	ENGINE: Maximum Brake Hp. at Governed R.P.M.	ENGINE: Maximum Net Torque (Lb. Ft.) at Specified R.P.M.	ENGINE: Compression Ratio—to 1	ENGINE: Compression Pressure—(Lb.) at Specified R.P.M.	ENGINE: Valve Arrangement	Oiling System: Pressure to—
1	ACF-Brill▲ IC-41A	37-41	IC	270	419½	387	80⅛–71¼	20000	11.00/22	HS 190-5	4-G	UF	6–5¼x6	779	66.2	220–2200	625–1300	5.60	.....	I	acdfgh
2	C-27	27	CS	163	311	279	82¼–74	10600	8.25/20	Int RD-372	4-G	TR	6–4⅜x4½	372	45.9	140–2850	282–1400	6.30	.....	I	acdfgh
3	C-31	31	CS	196	344	312	81¾–74	11300	9.00/20	Int RD-406	4-G	TR	6–4⅜x4½	406	45.9	149–2750	319–1200	6.30	.....	I	acdfgh
4	C-44	44	CS	249	420	391	80¼–71	17800	11.00/22	HS 180-1	4-G	UF	6–5x6	707	60.0	208–2200	540–1400	6.00	.....	I	acdfgh
5	C-44	45	Sub	249	420	391	80¼–71	18900	11.00/22	HS 190-2	4-G	UF	6–5¼x6	779	66.2	220–2200	625–1300	5.60	.....	I	acdfgh
6	C-51	51	CS	256	482⅞	452½	85 –76	20650	11.00/22	HS 190-2	4-G	UF	6–5¼x6	779	66.2	220–2200	625–1300	5.60	.....	I	acdfgh
7	SU-37	37	Sub	198	359	325	81¾–74	12900	9.00/20	Int RD-450	4-G	TR	6–4⅜x5	451	45.9	158–2600	359–1200	6.20	.....	I	acdh
8	IC-41AD	37-41	P	270	419½	387	80⅛–71¼	20700	11.00/22	Cum nhhb600	4-D	UF	6–5¼x6	743	63.0	200–2100	535–1100	15.5	.....	I	abcd
9	Beaver 35PT	37	CS	195⅜	372	192	81 –71½	13500	9.00/20	Int RD450	4-G	TR	6–4⅜x5	451	45.9	152–2600	358–1200	6.30	122–160	I	abcd
10	40PT	40-43	CS	222¼	411	231	81 –71½	14700	9.00/20	Int RD450	4-G	R	6–4⅜x5	450	45.9	152–2600	358–1200	6.30	122–160	I	abcd
11	Beck Luxury Liner	37	IC	220	420	356	80¼–71½	.....	11.00/20	Cum HRB600	4-D	R	6–5¼x6	743	63.1	165–1800	540–1000	15.5	.....	I	abcd
12	Mainliner	37	P	220	412	350	80¼–71½	.....	10.00/20	Int RD450♦	4-G	R	6–4⅜x5	450	45.9	146–2600	354–1000	6.20	.....	I	abcd
13	29-33	29-33	P	217½	402	288	80¼–71½	.....	10.00/20	Cum JBS600▼	4-D	R	6–4½x5	401	40.6	150–2500	360–1500	15.5	.....	I	abcd
14	Fitzjohn FTG Cityliner	29–31	CS	155¼	323¼	277	81⅛–74	12000	8.25/20	Her JXLD	4-G	TR	6–4x4½	339	38.4	131–3000	272–1400	6.20	.....	L	abcdg
15	FTG Cityliner	29–31	CS	155¼	323¼	277	81⅛–74	12400	8.25/20	Her WXLD	4-G	TR	6–4½x4¾	404	43.3	140–2600	316–1400	6.50	.....	L	ac
16	FTG Cityliner	33–35	CS	182½	351	304¾	81⅛–74	12750	9.00/20	Her JXLD	4-G	TR	6–4x4½	339	38.4	131–3000	272–1400	6.20	.....	L	abcdg
17	FTG Cityliner	33–35	CS	182½	351	304¾	81⅛–74	13150	9.00/20	Her WXLD	4-G	TR	6–4½x4¾	404	43.3	140–2600	316–1400	6.50	.....	L	ac
18	FTD Cityliner	33–35	CS	182½	351	304¾	81⅛–74	13800	9.00/20	Her DWXLD	4-D	TR	6–4½x5	426	43.3	142–2600	330–1500	15.5	.....	VI	abcd
19	FTG Cityliner	37–39	CS	210¼	378¾	332½	81⅛–74	13900	10.00/20	Her WXLD	4-G	TR	6–4½x4¾	404	43.3	140–2600	316–1400	6.50	.....	L	ac
20	FTD Cityliner	37–39	CS	210¼	378¾	332½	81⅛–74	14550	10.00/20	Her DWXLD	4-G	TR	6–4½x5	426	43.3	142–2600	330–1500	15.5	.....	VI	abcd
21	FSG Suburbanliner	29	Sub	155¼	325¼	277	81⅛–74	12500	8.25/20	Her JXLD	4-G	TR	6–4x4½	339	38.4	131–3000	272–1400	6.20	.....	L	abcdg
22	FSG Suburbanliner	29	Sub	155¼	325¼	277	81⅛–74	12900	8.25/20	Her WXLD	4-G	TR	6–4½x4¾	404	43.3	140–2600	316–1400	6.50	.....	L	ac
23	FSG Suburbanliner	33	Sub	182½	351	304¾	81⅛–74	13250	9.00/20	Her JXLD	4-G	TR	6–4x4½	339	38.4	131–3000	272–1400	6.20	.....	L	abcdg
24	FSG Suburbanliner	33	Sub	182½	351	304¾	81⅛–74	13650	9.00/20	Her WXLD	4-G	TR	6–4½x4¾	404	43.3	140–2600	316–1400	6.50	.....	L	ac
25	FSD Suburbanliner	33	Sub	182½	351	304¾	81⅛–74	14300	9.00/20	Her DWXLD	4-D	TR	6–4½x5	426	43.3	142–2600	330–1500	15.5	.....	VI	abcd
26	FSG Suburbanliner	37	Sub	210¼	378¾	332½	81⅛–74	14400	10.00/20	Her WXLD	4-G	TR	6–4½x4¾	404	43.3	140–2600	316–1400	6.50	.....	L	ac
27	FSD Suburbanliner	37	Sub	210¼	378¾	332½	81⅛–74	15050	10.00/20	Her DWXLD	4-D	TR	6–4½x5	426	43.3	142–2600	330–1500	15.5	.....	VI	abcd
28	510 Duraliner	28–32	IC	185¾	321¾	286	77⅞–65¼	13500	9.00/20	Her JXLD	4-G	Fr	6–4x4½	339	38.4	131–3000	272–1400	6.20	.....	L	abcdg
29	635 Superduraliner	36–40	IC	254½	401½	365	80 –71½	17800	11.00/20	Wau 140GKB	4-G	Fr	6–4½x5½	525	55.0	176–2600	435–800	6.40	.....	I	abcdgh
30	Fixible 218B7	37	IC	218	410¾	338	80⅛–69¾	15100	9.00/20	Bui FB320	4-G	R	6–3⅞x4⅛	320	37.8	144–3400	278–2200	6.30	.....	I	acdf
31	182B1	25	IC	182	374¾	264	80⅛–69¾	14600	9.00/20	Bui FB320	4-G	R	6–3⅞x4⅛	320	37.8	144–3400	278–2200	6.30	.....	I	acdf
32	218F1	29	IC	218	410¾	301	80⅛–69¾	15610	9.00/20	Fag FTC180	4-G	R	6–4¼x4¾	404	43.3	162–2800	362–1600	7.50	.....	I	abc
33	218JBS1	29	IC	218	410¾	300	80⅛–69¾	15455	9.00/20	Cum JBS600	4-D	R	6–4½x5	401	.....	150–2500	360–1400	15.5	.....	I	abcd
34	218GM1	29	IC	218	410¾	300	80⅛–69¾	.....	9.00/20	GM 4-71	2-D	R	4–4¼x5	284	.....	150–2100	387–1600	16.0	.....	I	abcd
35	Fixible-Twin Coach FT-30	36	CS	190¾	365	340	80 –72	14400	10.00/20	Fag FTC-180	4-G	UF	6–4¼x4¾	404	43.3	180–2800	379–1600	7.30	.....	I	.....
36	FT-33	40	CS	222	403	378	80 –72	15800	10.00/20	Fag FTC-200	4-G	UF	6–4¼x5	451	45.9	200–2800	442–1600	7.20	.....	I	.....
37	FT-35	44	CS	232½	420	402	80 –72	16600	10.00/20	Fag FTC-200	4-G	UF	6–4¼x5	451	45.9	200–2800	442–1600	7.20	.....	I	.....
38	FT-40	52	CS	274¼	480	462	80 –72	16500	11.00/20	Fag FTC-210	4-G	UF	6–4½x5	477	48.6	210–2800	480–1600	7.10	.....	I	.....
39	G.M.C. TGH3102	31	CS	180½	325⅝	287	81¼–75¼	9635	8.25/20	Own 270	4-G	TR	6–3⅜x4	270	34.3	124–3200	232–1000	7.50	165–1000	I	abcdfgh
40	TDH3714	37	CS	210½	369½	336	79⅛–70½	16075	10.00/20	Own 4-71	2-D	TR	4–4¼x5	284	28.9	133–2000	400–1200	16.0	475–1000	I	abcdfgh
41	TDH4512	45	CS	238¾	420	389	78⅛–70½	17170	10.00/20	Own 6-71	2-D	TR	6–4¼x5	426	43.4	170–2000	170–2000	16.0	475–1000	I	abcdfgh
42	TDM4515	45	Sub	238¾	420	389	78⅛–70½	19000	10.00/20	Own 6-71	2-D	TR	6–4¼x5	426	43.4	200–2000	200–2000	16.0	475–1000	I	abcdfgh
43	TDH5105	51	CS	281	477	441	87¼–76½	18655	11.00/20	Own 6-71	2-D	TR	6–4¼x5	426	43.4	170–2000	170–1200	16.0	475–1000	I	abcdfgh
44	TDH5106	51	CS	281¾	477	441	80⅛–70½	18445	11.00/20	Own 6-71	2-D	TR	6–4¼x5	426	43.4	170–2000	170–1200	16.0	475–1000	I	abcdfgh
45	TDM5108	51	Sub	281¾	477	441	80⅛–70½	20625	11.00/20	Own 6-71	2-D	TR	6–4¼x5	426	43.4	200–2000	200–2000	16.0	475–1000	I	abcdfgh
46	PD4104	41	P	261	420	390	78⅛–70½	19310	11.00/20	Own 6-71	2-D	TR	6–4½x5	426	43.4	200–2000	200–2000	16.0	475–1000	I	abcdfgh
47	Mack C41	41	CS	237½	396	366⅜	79⅛x70⅛	16900	10.00/20	Own END673	4-D	TR	6–4⅞x6	672	57.0	170–2100	480–1200	16.6	530–1000	I	acdeh
48	C45	45	CS	261½	420	390⅝	79⅛–70⅛	17300	10.00/20	Own END673	4-D	TR	6–4⅞x6	672	57.0	170–2100	480–1200	16.6	530–1000	I	acdeh
49	C49	49	CS	289½	472½	443	79⅛–70⅛	19000	11.00/20	Own END673	4-D	TR	6–4⅞x6	672	57.0	170–2100	480–1200	16.6	530–1000	I	acdeh
50	Marmon-Herrington 8MB	27	CS	146	312	.....	80⅛–65⅛	9800	8.25/20	Ford 254	4-G	TR	6–3½x4½	254	29.4	104–3000	212–1200	6.85	.....	L	acd
51	8M2B	31	CS	182	348	.....	.....	10000	8.25/20	Ford 254	4-G	TR	6–3½x4½	254	29.4	104–3000	212–1200	6.85	.....	L	acd
52	8MC	27–29	CS	146	312	.....	80⅛–65⅛	10000	8.25/20	Ford 279	4-G	TR	6–3.56x3½	279	40.6	138–3200	244–1850	7.00	.....	I	acdfg
53	8M2C	31–35	CS	182	348	.....	80⅛–65⅛	10550	8.25/20	Ford 279	4-G	TR	6–3.56x3½	279	40.6	138–3200	244–1850	7.00	.....	I	acdfg
54	Southern Coach S-45	45	CS	234	419	402	80¼–72	19868	11.00/20	Cum nhhb600	4-D	UF	6–5½x6	743	63.0	200–2100	535–1200	15.5	.....	I	abcdf
55	Transit 328	28	CS	153½	336	275	81½–73	11100	8.25/20	Cont K-6330	-G	Lr	6–4x4⅜	330	38.4	145–3200	266–1800	6.50	.....	I	acdfg
56	332	32	CS	181½	364	303	81½–73	11500	8.25/20	Cont K-6330	-G	Lr	6–4x4⅜	330	38.4	145–3200	266–1800	6.50	.....	I	acdfg
57	340	40	CS	237½	420	359	80½–71¼	15120	10.00/20	LeR T-H540	-G	Lr	8–4½x4½	540	64.8	207–3200	450–1800	6.70	115-Cr	I	abcdef
58	White 1136	36–37	CSS	191	380½	.....	82⅛–71¼	16135	10.00/20	Own 280TA	4-G	UF	6–4½x5	504	51.3	175–2800	410–1400	6.50	.....	L	abcdh
59	1140	40–41	CSS	214	395½	.....	82⅛–71¼	16655	11.00/20	Own 280TA	4-G	UF	6–4½x5	504	51.3	175–2800	410–1400	6.50	.....	L	abcdh
60	1144, 1144S	‡	CSS	238	419½	.....	82⅛–71¼	17300	11.00/20	Own 24A	4-G	UF	12–4½x4½	681	81.7	210–2800	500–1400	6.10	.....	L	abcdh
61	1144D, 1150D	44–50	CS	268	468	.....	86⅞–77¾	19500	12.00/20	Cum NHHB	4-D	UF	6–5½x6	743	63.0	200–2100	540–1300	15.5	.....	I	abcd

ABBREVIATIONS

♦—Two used.
‡—Torque converter.
♦—Also available with Cummins JBS-600 engine.
▼—Also available with International RD-450 engine.
††—Right side, 13 leaves; left side, 14 leaves.
†—Front, 14⅞; rear, 15.
•—Hundred rpm.
▲—Air suspension.
‡—City, 44; Suburban, 42 or 45.
a—Main bearings.
b—Wrist pins.
c—Connecting rods.
d—Camshaft.
e—Accessory drive.
f—Valve lifters or rocker arms and shafts.
g—Timing gears or chain.
h—Air compressor.
i—Balancer shaft.
A—Air.
AL—Electric Auto-Lite Co.
BB—Borg & Beck.
Ben—Bendix Products.
BL—Brown Lipe Div.
Bos—American Bosch Div.
Bui—Buick Motor Div.
Ce—Centrifugal.
CIC—City and intercity service.
Cla—Clark Equipment Co.
Cont—Continental Motors Corp.
Cr—Cranking speed.
CS—City service.
CSS—City and suburban service.
Cum—Cummins Engine Co.
D—Diesel fuel.
Do—Downdraft.
DR—Delco-Remy Div.
Ds—Drive shaft.
Fag—Fageol.
Fe—Ford Motor Co.

▲ Just before going to press ACF-Brill announced the sale of its plant in Philadelphia to the Penn Fruit Co. of Philadelphia which operates a chain of supermarkets. A statement issued later by ACF-Brill Motors Co. stated it would

City and Intercity Types

FUEL SYSTEM			ELECTRICAL SYSTEM			Gov-ernor			TRANSMISSION				Uni-versals		REAR AXLE			BRAKES					SPRINGS				RUNNING GEAR			
Carburetor or Injector Pump					Battery													Service			Hand		Front		Rear					
Make and Type	Size (In.)	Tank Capacity (Gal.)	Ignition System—Make	Generator and Starter—Make	Voltage and Amp. Hours Capacity	Type	Max. Governed Speed—M.P.H.	Clutch—Make and Size (In. diam.)	Make	No. of Forward Speeds	Low Speed Ratio—to 1	Type	Number	Size of Series	Make and Model	Standard Gear Ratio—to 1	Type of Applicator	Total Lining Area (Sq. In.)	Drum Diam. (In.)	Operates on—	Total Lining Area (Sq. In.)	No. of Leaves	Length and Width (In.)	No. of Leaves	Length and Width (In.)	Front Axle—Make	Steering Gear—Make	Outside Diameter of Min. Turn. Circle (Ft.)	Line Number
Zen..Up	2	150	DR	DR	12-160♣	Ce	68	Lg ...17	Spi	4	4.36	M	2	1700	Tim..R-112-W	4.11	A	699	16½	Ds	127	12	64-4	13	70-5	Tim	Ro	84	1
Hol..Do	1¼	65	DR	LD	12-160	Va	51	Lg 14	Cia	3	4.06	M	2	1500	Tim....56434W	5.71	A	533	14½	Ds	85	11	60-3	12	64-3	Cia	Ro	64	2
Hol..Do	1¼	65	DR	LD	12-160	Va	54	Lg 14	Cia	3	4.06	M	2	1500	Tim....56434W	5.71	A	533	14½	Ds	85	12	60-3	12	64-3	Cia	Ro	72	3
Zen..Up	2	107	DR	LD	12-160	Ce	51	.....	Spi‡	If	.....	H	2	1700	Tim....59070W	5.14	A	830	16½	Ds	127	12	66-4	12	76-4	Tim	Ro	85	4
Zen..Up	2	107	DR	LD	12-160	Ce	68	Lg 17	Spi	4	4.36	M	2	1700	Tim....59070W	4.11	A	830	16½	Ds	127	12	66-4	12	76-4	Tim	Ro	85	5
Zen..Up	2	120	DR	LD	12-160	Ce	52	.....	Spi‡	If	.....	H	2	1700	Tim..R-100-W	5.57	A	899	16½	Ds	127	12	62-4	14	68-5	Tim	Ro	84	6
Hol..Do	1¼	75	DR	LD	12-160	Su	54	Lg 14	Cia	3	4.06	M	2	1600	Tim....58434W	5.29	A	533	14½	Ds	85	12	60-3	12	64-3	Cia	Ro	74	7
Cum	...	150	DR	DR	12-160♣	Ce	....	Lg 17	Spi	4	4.36	M	2	1700	Tim..R-112-W	4.11	A	899	16½	Ds	127	12	64-4	13	70-5	Tim	Ro	84	8
Hol..Do	...	80	DR	DR	12-158	Ce	55	Roc ...14	Spi	3	3.80	M	2	1500	Tim.....L110	5.28	A	614	15	Ds	45	10	60-3	16	60-3	Tim	Ro	65	9
Hol..Do	...	105	DR	DR	12-160	Ce	55	Lg 14	Spi	3	3.80	A	2	1600	Tim....Q110D	6.53	A	766	16½	Ds	62	12	60-3	17	60-3	Tim	Ro	37½	10
Cum	...	90	....	LN	12-155	M	68	LR....17	Fu	5	6.37	M	2	1600	TimQ-110-DPA	4.62	A	.....	15	Ds	.....	....	54-4	....	70-4	Tim	Ro	80	11
Hol..Do	...	92	DR	LD	12-155	Su	60	Lg 14	Fu	4	4.61	M	2	1500	Tim.....L110	5.28	A	.....	16½	Ds	.....	18	52-3	††	64-4	Tim	Ro	80	12
Cum	...	80	....	LD	12-155	M	56	Lg 14	Fu	4	4.61	M	2	1500	Tim.....L110	5.20	A	.....	16½	Ds	.....	16	52-3	17	58-3	Tim	Ro	78	13
Zen..Up	1¼	60	DR	DR	12-150	Ce	53	BB....13	Cia	3	4.06	M	2	1600	Tim....58434W	6.16	A	586	14½	Ds	85	14	54-3	14	60-3	Tim	Ro	57	14
Zen..Do	1¼	60	DR	LD	12-150	Ce	53	Lg 14	Cia	3	4.06	M	2	1600	Tim....58434W	6.16	A	586	14½	Ds	85	14	54-3	14	60-3	Tim	Ro	57	15
Zen..Up	1¼	60	DR	DR	12-150	Ce	53	BB....13	Cia	3	4.06	M	2	1600	Tim....58434W	6.16	A	586	14½	Ds	85	14	54-3	14	60-3	Tim	Ro	65	16
Zen..Do	1¼	60	DR	LD	12-150	Ce	53	Lg 14	Cia	3	4.06	M	2	1600	Tim....58434W	6.16	A	586	14½	Ds	85	14	54-3	14	60-3	Tim	Ro	65	17
Bos	...	60	DR	LD	12-205	Ce	53	BB....14	Cia	3	4.06	M	2	1600	Tim....58434W	6.16	A	586	14½	Ds	85	14	54-3	14	60-3	Tim	Ro	65	18
Zen..Do	1¼	60	DR	LD	12-150	Ce	53	Lg 14	Cia	3	4.06	M	2	1600	Tim....58434W	6.16	A	586	14½	Ds	85	15	54-3	15	54-3	Tim	Ro	73¼	19
Bos	...	60	DR	LD	12-205	Ce	53	BB....14	Cia	3	4.06	M	2	1600	Tim....58434W	6.16	A	586	14½	Ds	85	15	54-3	15	54-3	Tim	Ro	73¼	20
Zen..Up	1¼	60	DR	DR	12-150	Ce	53	BB....13	Cia	3	4.06	M	2	1600	Tim....58434W	6.16	A	586	14½	Ds	85	14	54-3	14	54-3	Tim	Ro	57	21
Zen..Do	1¼	60	DR	LD	12-150	Ce	53	Lg 14	Cia	3	4.06	M	2	1600	Tim....58434W	6.16	A	586	14½	Ds	85	14	54-3	14	54-3	Tim	Ro	57	22
Zen..Up	1¼	60	DR	DR	12-150	Ce	53	BB....13	Cia	3	4.06	M	2	1600	Tim....58434W	6.16	A	586	14½	Ds	85	14	54-3	14	54-3	Tim	Ro	65	23
Zen..Do	1¼	60	DR	LD	12-150	Ce	53	Lg 14	Cia	3	4.06	M	2	1600	Tim....58434W	6.16	A	586	14½	Ds	85	14	54-3	14	54-3	Tim	Ro	65	24
Bos	...	60	DR	LD	12-205	Ce	53	BB....14	Cia	3	4.06	M	2	1600	Tim....58434W	6.16	A	586	14½	Ds	85	14	54-3	14	54-3	Tim	Ro	65	25
Zen..Do	1¼	60	DR	LD	12-150	Ce	53	Lg 14	Cia	3	4.06	M	2	1600	Tim....58434W	6.16	A	586	14½	Ds	85	15	54-3	15	54-3	Tim	Ro	77¼	26
Bos	...	60	DR	LD	12-205	Ce	53	BB....14	Cia	3	4.06	M	2	1600	Tim....58434W	6.16	A	586	14½	Ds	85	15	54-3	15	54-3	Tim	Ro	73¼	27
Zen..Up	1¼	73	DR	DR	12-150	Ce	65	LR....13	Cia	4	5.00	M	3	1400	Tim....54430W	4.85	A	496	14½	Ds	88	11	60-3	13	63½-3	Tim	Ro	66½	28
Zen..Up	1¼	120	DR	DR	12-150	Ce	65	LR....15	Cia	4	4.34	M	4	1600	Tim.....L110	5.28	A	614	15	Ds	126	14	54-4	16	72-4	Tim	Ro	.....	29
Str..Do	...	80	DR	DR	12-155	Ce	63	Spi....13	Spi	5	4.62	M	2	1500	Tim.....H110	6.17	A	578	15	Ds	45	12	52-3	15	58-3	Tim	Ro	72	30
Str..Do	...	80	DR	DR	12-155	Ce	63	Spi....13	Spi	5	4.62	M	2	1500	Tim.....H110	6.17	A	578	15	Ds	45	12	52-3	15	58-3	Tim	Ro	65	31
Hol..Do	...	80	DR	DR	12-155	Ce	72	Spi....14	Spi	5	4.62	M	2	1500	FT..H110-DPA	5.28	A	578	15	Ds	45	12	52-3	15	58-3	FT	Ro	72	32
Cum	...	80	DR	DR	12-155	Ce	65	Spi....14	Spi	5	4.62	M	2	1500	Tim.....H110	5.28	A	578	15	Ds	45	12	52-3	15	58-3	Tim	Ro	72	33
GM	...	80	DR	DR	12-155	Ce	66	Lg ..15½	Spi	5	5.08	M	2	1500	Tim.....H110	4.62	A	578	15	Ds	45	12	52-3	15	58-3	Tim	Ro	72	34
Hol..Do	...	80	DR	LD	...-160	Ce	28*	None	Spi‡	...	5.43	H	2	1600	Tim.....L110	6.16	A	.....	16½	Ds	.....	12	56-4	13	60-4	Tim	Ro	69	35
Hol..Do	...	125	DR	LD	...-160	Ce	28*	None	Spi‡	...	5.43	H	2	1600	Tim.....Q110	6.16	A	.....	16½	Ds	.....	13	56-4	13	60-4	.....	Re	67½	36
Hol..Do	...	.....	DR	LD	...-160	Ce	28*	None	Spi‡	...	5.43	H	2	1600	Tim.....Q110	6.16	A	.....	16½	Ds	.....	12	60-4	13	64-4	Tim	Re	69½	37
Hol..Do	...	.....	DR	LD	...-160	Ce	.....	.....	Spi‡	...	5.43	H	2	1600	Tim.....R110	6.16	A	.....	16½	Ds	.....	13	60-4	15	64-4	Tim	Ro	79½	38
Zen..Do	1½	60	DR	DR	12-150	Ce	52	.....	GM	4	3.82	GH	2	1400	Cia R-1204	6.33	A	620	14½	Ds	28	10	52-3	11	58-3	Cia	Sag	68	39
Own	...	80	....	DR	12-175♣	Ce	48	Own ..15	GM	If	.....	H	2	1600	Tim..57620WX2	4.71	A	646	14½	Ds	69	▲	.....	▲	.....	Tim	Sag	74	40
Own	...	80	....	DR	12-175♣	Ce	48	Own ..15	GM‡	If	.....	H	2	1700	Tim..58620WX1	4.71	A	705	14½	Ds	104	▲	.....	▲	.....	Tim	Sag	78	41
Own	...	80	....	DR	12-175♣	Ce	61	Lg ...17	Spi	4	4.36	M	2	1700	Tim..58600WX1	3.88	A	705	14½	Ds	104	▲	.....	▲	.....	Tim	Sag	78	42
Own	...	80	....	DR	12-175♣	Ce	45	Own ..15	GM‡	If	.....	H	2	1700	Tim..59621WX1	5.16	A	874	14½	Ds	104	▲	.....	▲	.....	Tim	Sag	82	43
Own	...	80	....	DR	12-175♣	Ce	45	Own ..15	GM‡	If	.....	H	2	1700	Tim..59620WX1	5.16	A	874	14½	Ds	104	▲	.....	▲	.....	Tim	Sag	81	44
Own	...	80	....	DR	12-175♣	Ce	58½	Lg 17	Spi	4	4.36	M	2	1700	Tim..59610WX1	4.13	A	874	14½	Ds	104	▲	.....	▲	.....	Tim	Sag	81	45
Own	...	100	....	DR	12-205	Ce	58½	Lg 17	Spi	4	3.86	M	2	1700	Tim..59600WX1	4.13	A	764	14½	Ds	125½	▲	.....	▲	.....	Tim	Ro	83	46
Bos	....	BB	75	....	....	12-200	H	21*	Spi....16	Spi‡	If	.....	H	2	1700	Own ..RAS402	Var	A	764	15	Ds	139	13	62-3½	16	62-4	Own	Gem	69	47
Bos	....	BB	75	....	....	12-200	H	21*	Spi....16	Spi‡	If	.....	H	2	1700	Own ..RAS402	Var	A	764	15	Ds	139	13	62-3½	16	62-4	Own	Gem	74	48
Bos	....	BB	75	....	DR	12-200	H	21*	Spi....16	Spi‡	If	.....	H	2	1700	Own ..RAS402	Var	A	932	15	Ds	139	12	62-4	15	62-4	Own	Ben	72	49
Hol..Do	1¼	60	Fo	Fo	12-158	Ce	45	.....	12	Spi	3	3.54	M	2	1400	Tim.....	6.67	A	448	14½	Ds	83	....	54-3	....	58-3	Tim	Gem	30½	50
Hol..Do	1¼	60	Fo	Fo	12-158	Ce	45	.....	12	Spi	3	3.54	M	2	1400	Tim.....	6.67	A	448	14½	Ds	83	....	54-3	....	58-3	Tim	Gem	35½	51
Hol..Do	1¼	60	Fo	Fo	12-158	Ce	48	Lg 12	Spi	3	3.54	M	2	1400	Tim..53589WX	6.67	A	448	14½	Ds	83	....	54-3	....	58-3	Tim	Gen	30½	52
Hol..Do	1¼	60	Fo	Fo	12-158	Ce	48	Lg 12	Spi	3	3.54	M	2	1400	Tim..53589WX	6.67	A	448	14½	Ds	83	....	54-3	....	58-3	Tim	Gem	35½	53
Cum	...	116	....	Op	12-200	Ce	41	BL....16	Spi‡	If	.....	H	2	1700	Tim..R110WX8	6.83	A	840	16	Ds	127	13	62-3½	16	70-4	Tim	Ro	80	54
Zen..Do	1¼	60	DR	DR	12-158	Ce	45	BB....13	War	3	3.71	M	2	1400	Cia R-1001	6.33	A	585	14½	Ds	28	....	56-3	....	58-3	Cia	Ro	54	55
Zen..Do	1¼	60	DR	DR	12-158	Ce	45	BB....13	War	3	3.71	M	2	1400	Cia R-1001	6.33	A	585	14½	Ds	28	....	56-3	....	58-3	Cia	Ro	60	56
Zen..Do	1¼	90	DR	LD	12-158	Su	45	Lg ..15½	Spi	3	3.80	M	2	1600	Cia R-1502	6.67	A	644	14½	Ds	45	....	56-4	....	58-4	Cia	Ro	76	57
Zen..Ho	1½	105	DR	LD	12-158	HM	57	None	Own	2	1.98	H	2	1700	Own.....88C	5.57	A	818	15	Ds	123	11	66-4	12	72-4	Own	Ro	33½	58
Zen..Ho	1½	130	DR	LD	12-158	HM	58	None	Own	2	1.98	H	2	1700	Own.....88C	5.57	A	818	15	Ds	123	11	66-4	12	72-4	Own	Ro	39½	59
Zen..Ho	1½	130	DR	LD	12-158	HM	88	None	Own	2	1.98	H	2	1700	Own.....88C	5.57	A	818	15	Ds	123	11	66-4	12	72-4	Own	Ro	41.6	60
Cum	...	85	....	DR	12-158♣	Ce	51	.....	Spi‡	2	6.00	H	2	....	Own.....88C	4.88	A	818	15	Ds	123	11	66-4	12	72-4	Own	Ro	41½	61

Fr—Front.
FT—Fixible-Timken.
Fu—Fuller Mfg. Co.
G—Gasoline.
Gem—Gemmer Mfg. Co.
GH—G. M. Hydramatic.
GM—General Motors Corp.
H—Hydraulic.
Her—Hercules Motor Corp.
HM—Hydraulic mechanical.
Ho—Horisontal.
Hol—Holley Carburetor Co.
HS—Hall Scott Motor Div.
I—Valve in head.
IC—Intercity service.
If—Infinite.
Int—International Harvester Co.
L—Valves in side.
LD—Leece-Neville (alternator); Delco-Remy (starter).
LeR—LeRoi.
Lg—Long Mfg. Div.
LN—Leece-Neville Co.
Lr—Longitudinally in rear.
LR—Lipe Rollway Corp.
M—Mechanical.
Op—Optional. P—Parlor.
R—Rear.
Ro—Ross Gear and Tool Co.
Roc—Rockford Drilling Machine Co.
Sag—Saginaw Steering Gear Div.
Spi—Spicer Mfg. Div.
Str—Stromberg Carburetor Div.
Su—Suction.
Sub—Suburban service.
Tim—Timken Detroit Axle Co.
TR—Transverse in rear.
UF—Under floor.
Up—Updraft. Va—Vacuum.
VI—Vee type engine with overhead valves.
War—Warner Gear.
Wau—Waukesha Motor Co.
Zen—Zenith Carburetor Div.

continue to operate its own bus and trolley coach service parts division at Philadelphia, along with the service parts business of its Hall-Scott Motors Division of Berkeley, Calif.

NEW HEATER-DEFROSTER

SMALLER IN SIZE ...BIGGER IN OUTPUT!

The new EVANS ED-75

SMALL
only 8-1 16" x 8-5 16" x 8-3 8"

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17,800 BTU Output

EFFICIENT
split core and tank travel water further — heat lingers longer

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"Continuous service" bus type motor — heavy duty truck service core

ADAPTABLE FOR RECIRCULATING OR FRESH AIR
Simple to connect to top or side cowl for fresh air intake

Provides more heat output than any other heater-defroster of its size

Each Evans unit is custom engineered for its specific vehicle installation, to provide a completely satisfactory heating and ventilating system. Evans units are available for a wide variety of commercial vehicle applications.

The Evans organization is staffed to engineer units to specification, organized to build prototypes quickly, equipped to conduct precision tests to latest A.S.H.V.E. procedures. Military experience dating back to World War I qualifies Evans to work with you in meeting the rigid specifications of the Armed Forces. If your needs are for high performance, ruggedly constructed equipment—it will pay you to consult Evans Products Company, Heating & Ventilating Division, Dept. Q-4, Plymouth, Mich.

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EVANS ... BALANCED HEATING & VENTILATING **CUSTOM HEATERS** ... FOR EVERY TRUCK AND BUS

CCJ's Truck Specifications

COMPILED FROM DATA SUPPLIED EACH MONTH BY MANUFACTURERS

KEY TO DEFINITIONS

MAKE AND MODEL

Only Domestic Truck Models are listed.

OPTIONAL UNITS

For the express purpose of best fitting the truck to the individual job most of the models listed can be provided with optional engines, transmissions, axles, etc., and these models when so equipped are considered standard stock models.

CHASSIS LIST PRICE

The chassis list price applies to the minimum standard wheelbase with standard tires and standard equipment. All prices are F.O.B. factory. Chassis list price does not include the price of the Cab unless otherwise noted.

RECOMMENDED GROSS VEHICLE WEIGHT FOR NORMAL SERVICE

The Gross Weights published herewith are those supplied by manufacturers as their Recommended Gross Vehicle Weights for Normal Operating Conditions, and are based upon the Maximum Authorized Tire Size listed. In actual practice the manufacturer may either increase or decrease the gross vehicle weight rating when either favorable or unfavorable operating conditions are involved. Since the proper performance of a motor truck depends upon many factors, including grades, road conditions, etc., the gross weights that a manufacturer is prepared to recommend will vary with particular conditions, and the manufacturer's own standard of safety factors. Specific recommendations, therefore, should be obtained from the manufacturer's representative.

CHASSIS WEIGHT

The chassis weight listed includes the weight of the minimum standard wheelbase chassis, with cowl, with standard tires, with standard equipment, with crankcase and cooling system full, and 5 gallons of fuel in the tank. It does not include the weight of the Cab. This applies to C.O.E. as well as conventional chassis types. Exceptions are noted.

STANDARD TIRE SIZE

The standard tire size listed is that which is included in the Chassis List Price.

MAXIMUM AUTHORIZED TIRE SIZE

The tire size listed in this column is the maximum size recommended by the manufacturer of the chassis for the Gross Vehicle Weight for Normal Operating Conditions. It is furnished at extra cost, if it differs from the standard size. Dual rears are understood; exceptions noted.

MINIMUM STANDARD WHEELBASE

The minimum standard wheelbase is the so-called standard wheelbase on which the Chassis List Price is based.

MAXIMUM STANDARD WHEELBASE

The maximum standard wheelbase is the extreme end of the standard range of wheelbases offered by the chassis maker.

MAXIMUM BRAKE HP.

Maximum Brake Horsepower at Given R.P.M. is actual dynamometer reading without accessories.

GEAR RATIO RANGE

Gear Ratio Range in High—Ratios within the range given are available at no extra cost. Exceptions are noted.

TRACTORS

Unless given the designation (N)— meaning not available as a tractor—all standard models may be assumed to be available as tractors. Exclusively Tractor models are designated (T).

KEY TO ABBREVIATIONS

MAKES—ALL

B—Bendix.
BL—Brown-Lipe.
Bu or Bud—Buda.
BW—Bendix-Westinghouse.
C—Chevrolet.
Cl or Cla—Clark.
Con—Continental.
Cu or Cum—Cummins-Diesel.
Eat—Eaton.
F—Ford.
Fu—Fuller.
G-H—Goodyear-Hawley type.
H—Hotchkiss.
Her—Hercules.
HS—Hall-Scott.
Int—International Harvester.
Kai—Kaiser Motors Corp.
L—Lockheed.
LeR—LeRoi.
LH—Lockheed front, Wagner "hi-Tork" rear.
LT—Lockheed type front Timken rear.
LW—Lockheed front, Wisconsin rear.
M—Midland.
N.P.—New Process.
O or Ow—Own.
Op or Opt—Optional.
Shu—Shuler.
Spi—Spicer.
T or Tim—Timken-Detroit Axle Co.
Tw—Timken-Detroit—Westinghouse.
TW—Timken-Detroit—Wisconsin.
Var—Variable.
WG—Warner Gear.
Wau—Waukesha.
W or Wis—Wisconsin.
Wg—Wagner "hi-Tork."
Ws—Westinghouse.
WW—Westinghouse or Wagner

WHEELS DRIVEN

2F—Forward unit of Rear Axle Group.
2R—Rear Unit of Rear Axle Group.
4R—Forward and rear units of Rear Axle Group.
6—All wheels.

BRAKES—SERVICE

Location

4—Four Wheels, front and rear.
4r—Four Wheels, rear only.

Type

I—Internal.
X—External.

Operation

A—Air.
H—Hydraulic.
V—Vacuum.
D or Dp—Dual Primary.

BRAKES—HAND

Location

C—Center of double propeller shaft.
2—Rear wheels.
4—Four wheels.
6—Six wheels.
P—Back of Power Divider.
J—Jackshaft.
T—Transmission.
F—Driveshaft.

Type

D—Tru-Stop disk.
I—Internal.
M—Mechanical.
X—External.
PD—Two drums on rear of power divider.
F—Mechanical, foot operated

BRAKE DRUMS

Material

a—Cast alloy iron.
A—American Car Foundry.
c—Cast iron.
Cc—Composite Front, Cast Iron in rear.
Ce—Centrifuse.
Cl—Copper iron.
Co—Composite.
D—Dayton.
E—Ermalite.
G—Gunite.
N—Nickel iron.
S—Steel.

(Where a combination of any of the above is used, the first reference mark applies to the front and the second to the rear drums.)

FRAME

Type

C—Channel.
T—Channel tapered front and rear.
L—Channel reinforced with liner.
B—Channel reinforced with both liner and fishplate.
P—Channel reinforced with plate.
TL—Channel tapered front and rear reinforced with liner.
D—Drop Center.
Tf—Tapered front.
A—Straight section sidemembers, lined with oak inserts.
Z—Reinforced (X) member frame, box type sections.
BG—Box girder.

REAR AXLE

Final Drive and Type

B—Bevel.
CD—Chain Drive.
F—Full-floating.
H or Hy—Hyphoid.
d—Dual range axle.
2—Double Reduction.
S—Spiral bevel
W—Worm.
¾—Three Quarters Floating.
½—Semi-Floating.
T—Torque Tube.

GEAR RATIOS

(°°) Only one ratio.

Drive and Torque

H—Hotchkiss (springs).
R—Radius Rods.
L—Parallel Torque Rods.
T—Torque Arm.

GOVERNOR STANDARD

Y—Yes.
N—No.

KEY TO REFERENCES

c.f.—Cab Forward design.
c.o.e.—Cab-Over-Engine design.
(D)—Diesel-engine equipped.
(T)—Designed for tractor use only.
(C)—Ford or Chevrolet Models.
(R)—Remanufactured Fords.
^—Denotes "Includes Cab" when used with weights or prices.

BROWN

°°—All six engines listed are available on all five models of trucks.
•—Steel frame only. Also available with Aluminum frame 10x3½x½.
†—Many variations available with Fuller or Spicer transmissions.

CHEVROLET

†—6500 lb. G.V.W. when 6.50/16 dual tires are used on rear.
▼—Includes spare tire, full fuel tank and cooling system.
^—7.50/20 can be used on the front with no decrease in G.V.W. when 8.25/20 are used on dual rear wheels.
::—Own Loadmaster engine available at extra cost.
‡—8.25/20 front tires are required when 9.00/20 dual rears are used.
††—Diameter: (Average) Front, 2.6858; Front Center, 2.7168; Rear Center, 2.7478; Rear, 2.7788. Total Length 5½.
†—Hydramatic optional.
‡—Heavy duty 3 speed transmission optional.
††—Also available in 5.14 ratio.
□—5.43 available.
□□—Two speed axle available.
•—8⅞x2⅞x¼ is used with heavy-duty equipment.
▼—Powerglide optional.
●—Blue Flame 125 engine optional.
^^—Jobmaster 261 engine optional.

CORBITT

•—Available with optional tires and axles for less G.V.W. rating.
‡‡—Also available with Cummins HRB3600, NHB600 and HRB600.
†—Also available with Continental R6602, R6513 and R6572.
●—Semi-cab over engine.
■—Also available as semi-cab over engine.

DODGE

^—Front only: Rear 7.00/168.
•—Front only: Rear 8.25/168.
¶—Front only: Rear 7.50/20.
‡—Front only: Rear 9.00/20.
†—Front only: Rear 10.00/20.
■—Front only: rear 8.25/20.
•—Twin carburetion.

DUPLEX

‡—Torque Divider, Timken T70-2 speed.

FEDERAL

•—Diesel engine obtainable.
†—Five speed transmission obtainable.
‡—Auxiliary transmission Spicer 6231B with 3 forward speeds.
§—Auxiliary transmission Spicer 8031.
‡—5501, 6001 and 6501 have single speed, double reduction rear axle.
::—Radius rods obtainable.
‡—For wheelbases below 196" —9 x 3 x ¼.
‡‡—Diesel engine obtainable.
‡‡—Overdrive optional.
^—Torque Divider Timken T70-2 speed, T50 obtainable.
†—SW3020, SD3020 obtainable.
‡—SW3020 obtainable.
^—Rear only.
▼—With R series rear axle, reduce G.V.W. by 4000 lbs.

FORD

■—Front only; rear, 8.25/188.
†—Effective length.
□—Reinforcement standard on 192" w.b.
^—8⅞x2⅞x¼ standard on 154" w.b.
•—17000 for 210" w.b.
●—Rear only.
▼—CA dimension for 192" w.b. B600 model only.

FWD

•—Four wheel steering.

KENWORTH

††—Timken T13129 PA Trailing Axle.
†—14.00/24, front; 16.00/24, rear.
●—C.O.E. optional.
•—One man cab.
^—Torque converter plus Torquematic transmission optional.
■—Cab beside engine optional.

(Turn to Next Page, Please)

NAPCO

•—NAPCO — Northwestern Auto Parts Company (Chevrolet 4-wheel drive conversion).
††—See same footnote under Chevrolet.

OSHKOSH

^—Includes cab.
■—1091 cu. in.
°°—Hydraulic coupling optional.
^—Dependent upon engine.

REO

‡—Model 331-OA and 331-OA LPG engines can be furnished.
†—Two speed axle available.
^—Double reduction and 2 speed available.
•—Buda 6DT8-468 diesel engine available.
‡—Model 255-OA-LPG engine can be furnished.
†—Front only; rear, 10.00/20.
‡—OH-160 engine can be furnished.

STERLING

†—Rear only; Front 11.00/24.
‡—Rear only; Front 11.00/22.
‡—Own EJ three speed auxiliary transmission furnished.
§—Timken T70 two speed torque divider furnished.
†—Parking brake at rear of auxiliary transmission.
▼—Rear only; Front 12.00/24.
■—Rear only; Front 14.00/24.
•—Rear only; Front 16.00/24.
●—1125 cu. in.
††—Own model FJ three speed auxiliary transmission furnished.
‡‡—Timken T76 two speed transfer case furnished.
‡‡—Timken T77 two speed transfer case furnished.
‡—Parking brake at rear of transfer case.
‡‡—Tapered, 9 x 7 x 3¼ x ¼.
▼▼—Also available with Cummins Diesel engine and appropriate transmission.

STUDEBAKER

^—H.D. 6.20 or 6.80 optional.
•—Two speed 5.93-8.10 optional.
■—Two speed 6.48-8.86 optional.

TRUCKSTELL

•—Single front, dual rear.
††—With 3 speed power divider.
‡—Weight with cab and maximum tires.
▼—Including slip-over reinforcing frame channels.
†—Air brake optional.

WARD LA FRANCE

‡—Available with optional rear axles.
^^—Available with 11.00/22 or 12.00/20 tires for G.V.W. of 60,000 lbs and optional front and rear axles.
‡‡—Auxiliary transmission Fuller 3A65, 3B65, 3A92 and 3B92.

WILLYS

•—Complete vehicle-Pick-up Type body.
‡—Three speed transmission, 2 speed transfer case.
†—Or Spicer 53-2 at discretion of manufacturer only.

(Continued from Page 151)

Line Number	Make and Model	Chassis List Price	Wheelbase Minimum Standard	Wheelbase Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	Tire Sizes (D-dual rear, S-single rear) Standard Front and Rear	Tire Sizes Maximum Authorized Tire Size (Duals unless noted)	Engine Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number Diameter and Length	Governor Standard	Transmission Make and Model	Forward Speeds	Rear Axle Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	Front Axle Make and Model	Brakes Service Make Location Type Operation	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	Frame Side Rail Dimensions	Frame Type
	Available																														
1	(c.o.e.)....200	...	...	...	15000	5500▲	7.00/20D	8.25/20	Wau BM	6-3 3/4x4 1/8	263	5.9	178	78-2800	7-2 3/4x10 1/4	N	WG T9	4	Tim E100DPH	HF	H	** -6.20	Tim 32502H	L4IHV	314	534	a	TX	...	10x3x 1/4	T
2	(c.o.e.)....225	...	...	...	16500	6200▲	7.50/20D	8.25/20	Wau BZ	6-4x4 1/4	320	5.9	235	105-3200	7-2 5/8x10 1/4	N	WG T97	4	Tim E100DPH	HF	H	** -6.20	Tim 32502H	L4IHV	314	534	a	TX	...	10x3x 1/4	T
3	(c.o.e.)....250	...	...	...	20000	6400▲	8.25/20D	9.00/20	Wau BZ	6-4x4 1/4	320	5.9	235	105-3200	7-2 5/8x10 1/4	N	Fu 5A330	5	Tim H100DPH	HF	R	** -6.80	Tim 32502H	L4IHV	344	584	a	TX	...	10x3x 1/4	T
4	(c.o.e.)....400	...	...	...	22000	6800▲	9.00/20D	10.00/20	Wau BZ	6-4x4 1/4	320	5.9	235	105-3200	7-2 5/8x10 1/4	N	Fu 5A330	5	Tim L100DPH	HF	R	** -6.83	Tim 35000H	L4IHV	370	642	a	TX	...	12x3x 1/4	T
5	(c.o.e.)....500	...	...	...	23000	7500▲	9.00/20D	10.00/20	Wau MZA	6-4 1/4x4 3/4	404	5.6	285	130-3000	7-2 5/8x12 1/2	Y	Fu 5F430	5	Tim L100DPH	HF	R	** -6.83	Tim 35000H	L4IHV	370	642	a	TX	...	12x3x 1/4	T
6	(c.o.e.)....550	...	...	...	28000	8100▲	10.00/20D	11.00/20	Wau MZA	6-4 1/4x4 3/4	404	5.6	285	130-3000	7-2 5/8x12 1/2	Y	Fu 5F430	5	Tim Q100DPH	HF	R	** -7.80	Tim 26452H	L4IHV	458	846	a	TX	...	12x3x 1/4	T
7	(c.o.e.)..550 X	...	...	...	32000	9600▲	10.00/20D	11.00/24	Wau MZA	6-4 1/4x4 3/4	404	5.6	285	130-3000	7-2 5/8x12 1/2	Y	Fu 5F430	5	Tim S200DPH	2F	R	** -7.84	Tim 26452H	L4IHV	576	1054	a	FD	...	14x3x 5/16	T
8	(c.o.e.)....600	...	...	...	28000	10000▲	10.00/20D	11.00/24	Wau 140 GK	6-4 1/2x5 1/2	525	6.4	425	172-2600	7-3 1/4x13 7/8	Y	Fu 5A650	5	Tim R100P	HF	R	** -7.40	Tim 26452TW	L4IA	566	950	a	FD	...	14x3x 5/16	T
9	(c.o.e.)....601	...	...	...	28000	10900▲	10.00/20D	11.00/24	Wau 145 GK	6-5 1/4x6	779	6.2	595	240-2400	7-3 1/2x17 3/4	Y	Spi 7851	4	Tim R100P	HF	R	** -7.40	Tim 26452TW	L4IA	566	950	a	FD	...	14x3x 5/16	T
10	(D) (c.o.e.)....602	...	...	...	28000	11200▲	10.00/20D	11.00/24	Cum HB600	6-4 7/8x6	672	17.	500	150-1800	7-4 1/2x16 1/2	Y	Spi 7851	4	Tim R100P	HF	R	** -7.40	Tim 26452TW	L4IA	566	950	a	FD	...	14x3x 5/16	T
11	Biederman....NSH	...	130	190	21000	6070	8.25/20D	10.00/20	Her JXLD	6-4x4 1/2	339	6.9	272	131-3200	7-2 1/2x10 11/16	N	Fu 5A330	5	Tim H100DPH	SF	H	** -7.2	Ti FD900DPH	LH4IH	514	744	G	T	60	9x3x 1/4	C
12	....NSD	...	130	190	21000	6070	8.25/20D	10.00/20	Her JXLD	6-4x4 1/2	339	6.9	272	131-3200	7-2 1/2x10 11/16	N	Fu 5A330	5	Tim H300DPH	2D	H	6.67-9.44	Ti FD900DPH	LH4IH	514	744	G	T	60	9x3x 1/4	C
13	....NSR	...	142	171	21000	7420	8.25/20D	10.00/20	Her JXLD	6-4x4 1/2	339	6.9	272	131-3200	7-2 1/2x10 11/16	N	Spi 3541UP	5	Tim H110DPH	HFd	H	** -6.4	Tim 35141PX	T4A	...	...	G	T	...	9x3x 1/4	C
14	....HL	...	93	197	30000	12200	10.00/24D	12.00/24	Wau 140 GK	6-4 1/2x5 1/2	525	6.4	425	172-2600	7-3 1/4x13 13/16	Y	Spi 6252A	5	Tim R200	HFd	H	6.41-8.37	Tim 36000TW	T4A	...	...	G	T	81	10x3x 5/16	C
15	....CH	...	137	190	26000	7800	9.00/20D	10.00/20	Con T6427	6-4 5/16x4 7/8	427	6.4	350	170-3000	7-2 7/8x13 1/2	Y	Fu 5A620	5	Tim QT300	2D	H	6.36-8.61	Tim FD900	Ws4IA	620	928	G	TD	62	9x3x 1/4	C
16	Brown....**	...	...	...	...	...	...	...	Con R6572	6-4 3/4x5 3/8	572	5.9	440	172-2600	7-3 1/4x14 1/2	Y	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	....KT	...	144	166	37000	...	10.00/20	12.00/24	Cum HB600	6-4 7/8x6	672	17.	500	150-1800	7-4 1/2x16 1/2	Y	Fu 5C720†	5	Ti R100 DPA†	Hy	H	6.16-5.28†	Ti FE900 DPA	Ws4IA	...	...	a	2M	67	9 7/8x3 1/2x 1/4 ●	TF
18	....KP	...	144	166	37000	...	10.00/20	12.00/24	Cum HRB600	6-5 1/8x6	743	15.	530	165-1800	...	Y	Fu 5C720†	5	Ti R100 DPA†	Hy	H	6.16-5.28†	Ti FE900 DPA	Ws4IA	...	...	a	2M	67	9 7/8x3 1/2x 1/4 ●	TF
19	(c.o.e.)....LT	...	140	144	37000	...	10.00/20	12.00/24	Cum NHB600	6-5 1/8x6	743	15.	575	200-2100	...	Y	Spi 8055†	5	Ti R100 DPA†	Hy	H	6.16-5.28†	Ti FE900 DPA	Ws4IA	...	...	a	2M	Var	9 7/8x3 1/2x 1/4 ●	TF
20	(c.o.e.)....LP	...	118	140	37000	...	10.00/20	12.00/24	Cum HRBB600	6-5 1/8x6	743	15.	500	175-2000	...	Y	Spi 8055†	5	Ti R100 DPA†	Hy	H	6.16-5.28†	Ti FE900 DPA	Ws4IA	...	...	a	2M	Var	9 7/8x3 1/2x 1/4 ●	TF
21	(c.o.e.)....LS	...	118	140	37000	...	10.00/20	12.00/24	Bu 6DC844	6-5 1/4x6 1/2	844	...	640	210-2100	...	Y	Spi 8055†	5	Ti R100 DPA†	Hy	H	6.16-5.28†	Ti FE900 DPA	Ws4IA	...	...	a	2M	Var	9 7/8x3 1/2x 1/4 ●	TF
	Chevrolet																														
22	Sdn. Divy....D54	1508	115	...	4100	▼▲3275	6.70/15S	6.70/15S	O-Bl. Fl. 115●	6-3 9/16x3 15/16	236	7.5	200	115-3700	4- ♦ ♦	N	Own¶	3	Own	Hy 1/2	T	** -3.7	Own	O4IH	158	259	Co	2IM	...	4 13/16x2 1/4x 5/32	BG
23	....H54	996	116	...	4800	▲2560	6.00/16S	15S	O-Thrift Mas.	6-3 9/16x3 15/16	236	7.5	200	112-3700	4- ♦ ♦	N	Own♦	§3	Own	Hy 1/2	T	** -3.9	Own	O4IH	158	259	Co	2IF	39	5 3/4x2 1/4x 5/32	C
24	(c.f.)....J54	1128	125	...	†6900	▲2855	7.50/15S	7.50/17S†	O-Thrift-Mas.	6-3 9/16x3 15/16	236	7.5	200	112-3700	4- ♦ ♦	N	Own♦	§3	Own	HyF	H	†† -4.57	Own	O4IH	186	302	Co	2IF	48 1/4	5 13/16x2 1/4x 3/16	C
25	....K54	1149	125	...	7000	▲2675	15S	7.50/17S	O-Load Mas.	6-3 9/16x3 15/16	236	7.5	192	110-3600	4- ♦ ♦	N	Own♦	§3	Own	HyF	H	** -5.14	Own	O4IH	186	302	Co	2IF	...	5 13/16x2 1/4x 5/32	C
26	(c.f.)....L54	1218	137	...	8800	▲3195	7.00/17S	7.00/18	O-Thrift-Mas.	6-3 9/16x3 15/16	236	7.5	200	112-3700	4- ♦ ♦	N	Own♦	§4	Own	HyF	H	** -5.14	Own	O4IH	230	371	Co	2IF	60	7x2 3/4x 7/32	C
27	....M54	1255	137	...	10000	▲2950	7.00/17S	7.00/18	O-Load Mas.	6-3 9/16x3 15/16	236	7.5	192	110-3600	4- ♦ ♦	N	Own♦	§4	Own	HyF	H	** -5.14	Own	O4IH	230	371	Co	2IF	...	7x2 3/4x 7/32	C
28	....N54	1307	137	...	14000	▲3820	6.50/20D	7.50/20	O-Thrift Mas.::	6-3 9/16x3 15/16	236	7.5	200	112-3700	4- ♦ ♦	N	Own	4	Own	HyF	H	□ -6.17	Own	O4IH	375	597	Ce	TIX	60	7x2 3/4x 7/32 *	C
29	....P54	1344	161	...	14000	▲3925	6.50/20D	7.50/20	O-Thrift Mas.::	6-3 9/16x3 15/16	236	7.5	200	112-3700	4- ♦ ♦	N	Own	4	Own	HyF	H	□ -6.17	Own	O4IH	375	597	Ce	TIX	84	8 7/8x2 7/8x 1/4	C
30	....R54	1481	161	...	12000	▲4190	6.50/20D	7.50/20	O-Thrift Mas.::	6-3 9/16x3 15/16	236	7.5	200	112-3700	4- ♦ ♦	Y	Own	4	Own	HyF	H	□ -6.17	Own	O4IH	375	597	Ce	TIX	...	8 7/8x2 7/8x 1/4	C
31	....SV54	1634	137	...	15000	▲4280	7.50/20D	9.00/20△♦	O-Load Mas. ▲▲	6-3 9/16x3 15/16	236	7.5	200	112-3700	4- ♦ ♦	N	Own	4	Own	HyF	H	□□ -6.17	Own	O4IH	375	597	Ce	TIX	60	8 7/8x2 7/8x 1/4	C
32	....SW54	1671	161	...	15000	▲4385	7.50/20D	9.00/20△♦	O-Load Mas. ▲▲	6-3 9/16x3 15/16	236	7.5	200	112-3700	4- ♦ ♦	N	Own	4	Own	HyF	H	□□ -6.17	Own	O4IH	375	597	Ce	TIX	84	8 7/8x2 7/8x 1/4	C
33	....SX54	1713	179	...	15000	▲4515	7.50/20D	9.00/20△♦	O-Load Mas. ▲▲	6-3 9/16x3 15/16	236	7.5	200	112-3700	4- ♦ ♦	N	Own	4	Own	HyF	H	□□ -6.17	Own	O4IH	375	597	Ce	TIX	102	8 7/8x2 7/8x 1/4	C
34	(c.o.e.)....SS54	2024	110	...	15000	▼▲4795	7.50/20D	9.00/20△♦	O-Load Mas. ▲▲	6-3 9/16x3 15/16	236	7.5	192	110-3600	4- ♦ ♦	N	Own	4	Own	HyF	H	□□ -6.17	Own	O4IH	375	597	Ce	TIX	60 1/8	8 7/8x2 7/8x 1/4	C
35	(c.o.e.)....ST54	2061	134	...	15000	▼▲4860	7.50/20D	9.00/20△♦	O-Load Mas. ▲▲	6-3 9/16x3 15/16	236	7.5	192	110-3600	4- ♦ ♦	N	Own	4	Own	HyF	H	□□ -6.17	Own	O4IH	375	597	Ce	TIX	84 1/8	8 7/8x2 7/8x 1/4	C
36	(c.o.e.)....SU54	2098	158	...	15000	▼▲4945	7.50/20D	9.00/20△♦	O-Load Mas. ▲▲	6-3 9/16x3 15/16	236	7.5	192	110-3600	4- ♦ ♦	N	Own	4	Own	HyF	H	□□ -6.17	Own	O4IH	375	597	Ce	TIX	108 1/8	8 7/8x2 7/8x 1/4	C
37	(c.o.e.)....S54	2024	110	...	16000	▼▲4795	7.50/20D	9.00/20△♦	O-Load Mas. ▲▲	6-3 9/16x3 15/16	236	7.5	192	110-3600	4- ♦ ♦	N	Own	4	Own	HyF	H	□□ -6.17	Own	O4IH	375	597	Ce	TIX	60 1/8	8 7/8x2 7/8x 1/4	C
38	(c.o.e.)....T54	2061	134	...	16000	▼▲4860	7.50/20D	9.00/20△♦	O-Load Mas. ▲▲	6-3 9/16x3 15/16	236	7.5	192	110-3600	4- ♦ ♦	N	Own	4	Own	HyF	H	□□ -6.17	Own	O4IH	375	597	Ce	TIX	84 1/8	8 7/8x2 7/8x 1/4	C
39	(c.o.e.)....U54	2098	158	...	16000	▼▲4945	7.50/20D	9.00/20△♦	O-Load Mas. ▲▲	6-3 9/16x3 15/16	236	7.5	192	110-3600	4- ♦ ♦	N	Own	4	Own	HyF	H	□□ -6.17	Own	O4IH	375	597	Ce	TIX	108 1/8	8 7/8x2 7/8x 1/4	C
40	....V54	1634	137	...	16000	▲4280	7.50/20D	9.00/20△♦	O-Load Mas. ▲▲	6-3 9/16x3 15/16	236	7.5	200	112-3700	4- ♦ ♦	N	Own	4	Own	HyF	H	□□ -6.17	Own	O4IH	375	597	Ce	TIX	60	8 7/8x2 7/8x 1/4	C
41	....W54	1671	161	...	16000	▲4385	7.50/20D	9.00/20△♦	O-Load Mas. ▲▲	6-3 9/16x3 15/16	236	7.5	200	112-3700	4- ♦ ♦	N	Own	4	Own	HyF	H	□□ -6.17	Own	O4IH	375	597	Ce	TIX	84	8 7/8x2 7/8x 1/4	C
42	....X54	1713	179	...	16000	▲4515	7.50/20D	9.00/20△♦	O-Load Mas. ▲▲	6-3 9/16x3 15/16	236	7.5	200	112-3700	4- ♦ ♦	N	Own	4	Own	HyF	H	□□ -6.17	Own	O4IH	375	597	Ce	TIX	102	8 7/8x2 7/8x 1/4	C
43	Sch. Bus Ch.C54	1724	199	...	16000	▲4725	7.50/20D	8.25/20	O-Load Mas. ▲▲	6-3 9/16x3 15/16	236	7.5	200	112-3700	4- ♦ ♦	Y	Own	4	Own	HyF	H	□□ -6.17	Own	O4IH	375	597	Ce	TIX	...	8 13/16x2 13/16x 5/16	C
44	Sch. Bus Ch.C54	1742	212	...	16000	▲4730	7.50/20D	8.25/20	O-Load Mas. ▲▲	6-3 9/16x3 15/16	236	7.5	200	112-3700	4- ♦ ♦	Y	Own	4	Own	HyF	H	□□ -6.17	Own	O4IH	375	597	Ce	TIX	...	8 13/16x2 13/16x 5/16	C
45	Corbitt..G101B22*	...	137	...	22000	...	9.00/20	10.00/20	Cont M6330	6-4x4 3/8	330	6.7	258	125-3000	7-2 5/8x12	Y	Fu 5A33	5	Tim L100	HF	H	4.11-7.20	Tim 32502	LT4IHV	466	820	a	TX	60	8x3 1/4x 1/4	T
46	....G302B26*	...	144	...	26000	...	10.00/20	11.00/20	Cont B6427	6-4 5/16x4 7/8	427	6.5	328	142-3000	7-2 7/8x13 1/2	Y	Fu 5A43	5	Tim Q100	HF	H	5.29-6.83	Tim FD900	Tw4IA	560	928	a	TX	60	8 1/8x3 1/4x 5/16	T
47	....G402B28	...	144	...	28000	...	10.00/20	11.00/20	Cont T6427	6-4 5/16x4 7/8	427	6.4	342	163-2800	7-2 7/8x13 1/2	Y	Fu 5A43	5	Tim Q100	HF	H	5.29-6.83	Tim FE900	Tw4IA	560	928	a	TX	60	8 1/8x3 1/4x 5/16	T
48	....G402B35	...	144	...	35000	...	11.00/20	12.00/24	Cont T6427	6-4 5/16x4 7/8	427	6.4	342	163-2800	7-2 7/8x13 1/2	Y	Fu 5A43	5	Tim U200	2F	H	5.91-9.76	Tim FE900	Tw4IA	620	1034	a	TX	60	10 1/2x3 1/4x 1/4	TF
49	....G601B30	...	148	...	30000	...	10.00/22	11.00/24	Cont R6513†	6-4 1/2x5 3/8	513	6.0	410	180-2800	7-3 1/4x14 1/2	Y	Spi 6253	5	Tim R100	HF	H	5.29-6.83	Tim FE900	Tw4IA	560	928	a	2M	60	8 1/8x3 1/4x 5/16	T
50	....G603B35	...	148	...	35000	...	11.00/20	12.00/24	Cont R6602†	6-4 7/8x5 3/8	602	6.0	480	208-2600	7-3 1/4x14 1/2	Y	Spi 6253	5	Tim U200	2F	H	5.91-9.76	Tim FE900	Tw4IA	620	1034	a	TD	60	10 1/2x3 1/4x 1/4	TF
51	(D)....D401B25	...	144	...	25000	...	10.00/20	11.00/20	Her DWXD	6-4 1/4x4 3/4	404	16.	320	135-2600	7-3 1/2x11 5/8	Y	Fu 5A43	5	Tim Q100	HF	H	5.29-6.83	Tim 35000	Tw4IA	525	848	a	TX	60	8 1/8x3 1/4x 5/16	T
52	(D)....D404B35*	...	144	...	35000	...	11.00/20	12.00/24	Cum JBS600	6-4 1/8x5	401	15.	360	150-2500	7-3 7/8x7.8	Y	Spi 6253	5	Tim U200	ZF	H	5.91-9.76	Tim FE900	Tw4IA	620	1034	a	TD	60	10 1/2x3 1/4x 1/4	TF
53	(D)....D803B35	...	156	...	35000	...	11.00/20	12.00/24	Cum NHB600‡‡	6-5 1/8x6	743	16.	535	200-2100	7-4 1/2x16 1/2	Y	Fu 5C720	5	Tim U200	ZF	H	5.91-9.76	Tim FE900	Tw4IA	620	1034	a	TD	66	10 5/8x3 1/2x 5/16	TF
54	(T)....G302T22	...	137	...	22000	...	9.00/20	10.00/20	Cont B6427	6-4 5/16x4 7/8	427	6.5	328	142-3000	7-2 7/8x13 1/2	Y	Fu 5A43	5	Tim L100	HF	H	4.11-7.20	Tim 32502	Tw4IA	514	720	a	TX	60	7 7/8x3 1/4x 5/16	T
55	(T)....G402T25■	...	144	...	25000	...	10.00/20	11.00/20	Cont T6427	6-4 5/16x4 7/8	427	6.4	342	163-2800	7-2 7/8x13 1/2	Y	Fu 5A43	5	Tim Q100	HF	H	5.29-6.83	Tim 35000	Tw4IA	525	848	a	TX	60	8x3 1/4x 1/4	T
56	(T)....G452T26■	...	144	...	26000	...	10.00/20	11.00/20	Cont T6427	6-4 5/16x4 7/8	427	6.4	342	163-2800	7-2 7/8x13 1/2	Y	Fu 5A43	5	Tim QT300	2dF	R	5.62-7.80	Tim FD900	Tw4IA	560	928	a	TX	60	8x3 1/4x 1/4	T
57	(T)....G602T28	...	148	...	28000	...	10.00/22	11.00/24	Cont R6572†	6-4 3/4x5 3/8	527	6.0	451	195-2600	7-3 1/4x14 1/2	Y	Fu 5C650	5	Tim R100	HF	H	5.29-6.83	Tim FD900	Tw4IA	560	928	a	2M	60	8 1/8x3 1/4x 5/16	T
58	(T)....G603T35	...	148	...	35000	...	11.00/20	12.00/24	Cont R6602†	6-4 7/8x5 3/8	602	6.0	480	208-2600	7-3 1/4x14 1/2	Y	Fu 5C650	5	Tim U200	2F	H	5.91-9.76	Tim FE900	Tw4IA	620	1034	a	TD	60	10 5/8x3 1/2x 5/16	TF
59	(T)(D)..D404T25■	...	144	...	25000	...	10.00/20	11.00/20	Cum JBS600	6-4 1/8x5	401	15.	360	150-2500	7-3 7/8x7.8	Y	Fu R45C	8	Tim Q100	HF	H	5.29-6.83	Tim 35000	Tw4IA	525	848	a	2M	60	8x3 1/4x 1/4	T
60	(T)(D)..D454T26■	...	144	...	26000	...	10.00/20	11.00/20	Cum JBS600	6-4 1/8x5	401	15.	360	150-2500	7-3 7/8x7.8	Y	Spi 4753A	5	Tim QT300	2dF	R	5.62-7.80	Tim FD900	Tw4IA	560	928	a	2M	60	8x3 1/4x 1/4	T
61	(T)(D)..D456T26■	...	144	...	26000	...	10.00/20	11.00/20	Wau 135DKBS	6-4 1/4x5	426	18.	400	185-2800	7-3 1/4x16 3/16	Y	Fu 5A620	5	Tim Q300	2dF	R	6.53-8.53	Tim FD900	Tw4IA	560	928	a	2M	60	8x3 1/4x 1/4	T
62	(T)(D)...D802T30	...	156	...	30000	...	10.00/22	11.00/24	Cum HRB600‡‡	6-5 1/8x6	743	16.	540	165-1800	7-4 1/2x16 1/2	Y	Fu 5C720	5	Tim R100	HF	H	5.29-6.83	Tim FE900	Tw4IA	560	928	a	2M	66	8 1/8x3 1/4x 5/16	T
63	(T)(D).D803TJ30●	...	142	...	30000	...	10.00/22	11.00/24	Cum NHB600‡‡	6-5 1/8x6	743	16.	535	200-2100	7-4 1/2x16 1/2	Y	Fu 5C720	5	Tim R100	HF	H	5.29-6.83	Tim FE900	Tw4IA	560	928	a	2M	74	8 1/8x3 1/4x 5/16	T
64	(T)(D)..D808TL30	...	136	...	30000	...	10.00/22	11.00/24	Cu HRBB600‡‡	6-5 1/8x6	743	16	505	180-2000	7-4 1/2x16 1/2	Y	Fu 5C720	5	Tim R100	HF	H	5.29-6.83	Tim FE900	Tw4IA	560	928	a	TD	74	8 1/8x3 1/4x 5/16	T
65	(T)(D)...D802T35	...	156	...	35000	...	11.00/20	12.00/24	Cum HRB600‡‡	6-5 1/8x6	743	16.	540	165-1800	7-4 1/2x16 1/2	Y	Fu 5C720	5	Tim U200	2F	H	5.91-9.76	Tim FE900	Tw4IA	620	1034	a	TD	66	10 5/8x3 1/2x 5/16	TF
66	(T)(D).D803TJ35●	...	142	...	35000	...	11.00/20	12.00/24	Cum NHB600‡‡	6-5 1/8x6	743	16.	535	200-2100	7-4 1/2x16 1/2	Y	Fu 5C720	5	Tim U200	2F	H	5.91-9.76	Tim FE900	Tw4IA	620	1034	a	TD	74	10 5/8x3 1/2x 5/16	TF
67	(T)(D)..D808TL35	...	136	...	35000	...	11.00/20	12.00/24	Cu HRBB600‡‡	6-5 1/8x6	743	16.	505	180-2000	7-4 1/2x16 1/2	Y	Fu 5C720	5	Tim U200	2F	H	5.91-9.76	Tim FE900	Tw4IA	620	1034	a	TD	74	10 5/8x3 1/2x 5/16	TF
68	Dodge....C-1-B6	1017	108	116	4900	1970	6.00/16S	6.50/16S	Own T-334	6-3 1/4x4 5/8	230	7.3	194	110-3600	4-2 1/2x4.8	N	Own-ND	3	Own T-334	H 1/2	H	4.1 -4.78	Own T-334	O4IH	175	264	Ce	TX	40	5/8x2 1/8x6 1/8	C
69	....C-1-C6	1114	116	116	5800	2450	7.00/15S	7.00/15S	Own T-336	6-3 1/4x4 5/8	230	7.3	194	110-3600	4-2 1/2x4.8	N	NP-89905	3	Own T-336	H 1/2	H	4.1 -4.78	Own T-336	O4IH	184	277	Co	TX	48	5/32x2 5/32x6 1/8	C
70	....C-1-D6	1182	116	126	8000	2775	6.00/16S△	7.50/17S	Own T-338	6-3 1/4x4 5/8	230	7.3	194	110-3600	4-2 1/2x4.8	N	NP-89970	3	Own T-338	HyF	H	4.1 -4.89	Own T-338	O4IH	209	316	Co	TX	48	5/16x2 5/16x6 1/8	C
71	(c.f.)....C-1-D6	1206	116	126	8000	2580	7.00/16S	7.50/17S	Own T-362	6-3 1/4x4 5/8	230	7.3	194	110-3600	4-2 1/2-4.8	N	NP-90820	3	Own T-362	HyF	H	4.1- 4.89	Own T-362	O4IH	209	316	Co	TX	...	5/16x2 5/16x6 1/8	C
72	....C-1-DU6	2021	102	117	7900	2815	6.50/16S△	8.25/16S	Own T-164	6-3 1/4x4 5/8	230	7.3	191	103-3600	4-2 1/2-4.8	N	NP-88490	3	Own T-164	HyF	H	** -4.89	Own T-164	O4IH	209	316	Co	TX	...	5/8x2 5/8x6 1/8	C
73	....C-1-EU6	2539	142	142	10100	3270	7.50/16S*	9.00/16S	Own T-165	6-3 1/4x4 5/8	230	7.3	191	103-3600	4-2 1/2-4.8	N	NP-88500	4	Own T-165	HyF	H	** -5.83	Own T-165	O4IH	240	355	Co	TX	...	5/16x2 5/16x6 1/8	C
74	....C-1-F6	1378	129	153	14000	4000	6.50/20D	7.50/20	Own T-342	6-3 1/4x4 5/8	230	7.3	194	110-3600	4-2 1/2-4.8	N	NP-89960	4	Own T-342	HyF	H	5.63-6.83	Own T-342	O4IH	336	480	Ce	TX	60	5/16x2 3/4x8 5/16	C
75	(c.f.)....C-1-F6	1400	108	129	14000	3800	6.50/20S	7.50/20	Own T-364	6-3 1/4x4 5/8	230	7.3	194	110-3600	4-2 1/2-4.8	N	NP-90360	4	Own T-364	HyF	H	5.63-6.83	Own T-364	O4IH	336	480	Ce	TX	...	.21x2 11/16x8 5/16	C
76	....C-1-G6	▲1748	129	171	14500	4075	6.50/20D¶	8.25/20	Own TX-342	6-3 7/16x4 1/2	251	7.0	210	120-3600	4-2 1/2-5.1	N	NP-90360	4	Own TX-342	HyF	H	6.29-6.83	Own TX-342	O4IH	336	480	Ce	TX	60	.21x2 11/16x8 5/16	C

(Turn to Page 154, Please)

For Key to References and Abbreviations See Page 151

(Continued from Page 152)

Line Number	MAKE AND MODEL	Chassis List Price	WHEELBASE Minimum Standard	WHEELBASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear: Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number Diameter and Length	Governor Standard	TRANSMISSION: Make and Model	Forward Speeds	REAR AXLE: Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE: Make and Model	BRAKES SERVICE: Make Location Type Operation	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME: Side Rail Dimensions	Type
	Dodge—Cont'd																														
1	C-1-GA6	▲1923	129	171	14500	4200	6.50/20D♦	8.25/20	Own TX-342	6–3 1/8 x4 1/2	251	7.0	210	120–3600	4–2 1/2–5.1	N	NP-90360	4	Eat A4-1350	SFd	H	5.83–8.81	Own TX-342	O4IH	336	480	Ce	TX	60	2 1/2x2 3/4 x8 1/2	C
2	C-1-G8	▲1848	129	171	14500	4125	6.50/20D♦	8.25/20	Own VTX-342	8–3 1/8 x3 1/4	241	7.5	220	133–3800	5–2 3/8–4.8	N	NP-90360	4	Own VTX-312	HyF	H	6.29–6.83	Own VTX-342	O4IH	336	480	Ce	TX	60	2 1/2x2 3/4 x8 1/2	C
3	C-1-GA8	▲2023	129	171	14500	4250	6.50/20D♦	8.25/20	Own VTX-342	8–3 1/8 x3 1/4	241	7.5	220	133–3800	5–2 3/8–4.8	N	NP-90360	4	Eat A4-1350	SFd	H	5.83–8.81	Own VTX-342	O4IH	336	480	Ce	TX	60	2 1/2x2 3/4 x8 1/2	C
4	C-1-H6	▲1893	129	193	16000	4530	7.50/20D	8.25/20	Own T-344	6–3 1/8 x4 1/2	251	7.0	210	120–3600	4–2 1/2–5.1	N	NP-90360	4	Own T-344	HyF	H	6.29–6.83	Own T-344	O4IHV	336	480	Ce	TX	60	2 1/2x2 3/4 x8 1/2	C
5	C-1-HA6	▲2049	129	193	16000	4525	7.50/20D	8.25/20	Own T-344	6–3 1/8 x4 1/2	251	7.0	210	120–3600	4–2 1/2–5.1	N	NP-90360	4	Eat A5-1350	SFd	H	5.83–8.81	Own T-344	O4IHV	336	480	Ce	TX	60	2 1/2x2 3/4 x8 1/2	C
6	C-1-HM6	2129	108	162	16250	4480	7.50/20D	8.25/20	Own T-356	6–3 1/8 x4 1/2	251	7.0	205	112–3600	4–2 1/2–5.1	N	NP-89980	4	Own T-356	HyF	H	6.29–6.83	Own T-356	O4IHV	336	480	Ce	TX	60	2 1/2x2 3/4 x8 1/2	C
7	C-1-HMA6	2285	108	162	16250	4475	7.50/20D	8.25/20	Own T-356	6–3 1/8 x4 1/2	251	7.0	205	112–3600	4–2 1/2–5.1	N	NP-89980	4	Eat A5-1350	SFd	H	5.83–8.81	Own T-356	O4IHV	336	480	Ce	TX	60	2 1/2x2 3/4 x8 1/2	C
8	C-1-H8	▲1993	129	193	16000	4555	7.50/20D	8.25/20	Own VT-344	8–3 1/8 x3 1/4	241	7.5	210	133–3800	5–2 3/8–4.8	N	NP-90360	4	Own VT-344	HyF	H	6.29–6.83	Own VT-344	O4IHV	432	480	Ce	TX	60	2 1/2x2 3/4 x8 1/2	C
9	C-1-HA8	▲2149	129	193	16000	4525	7.50/20D	8.25/20	Own VT-344	8–3 1/8 x3 1/4	241	7.5	210	133–3800	5–2 3/8–4.8	N	NP-90360	4	Eat A5-1350	SFd	H	5.83–8.81	Own VT-344	O4IHV	432	480	Ce	TX	60	2 1/2x2 3/4 x8 1/2	C
10	C-1-J6	▲2186	129	171	17500	4525	7.50/20D	9.00/20	Own T-346	6–3 1/2 x4.8	265	7.0	225	123–3600	4–2 1/2–5.1	Y	NP-90680	5	Own T-346	HyF	H	6.29–6.83	Own T-346	O4IHV	432	604	e	TX	60	2 1/2x2 3/4 x8 1/2	C
11	C-1-JA6	2400	129	171	17500	4725	7.50/20D	9.00/20	Own T-346	6–3 1/2 x4.8	265	7.0	225	123–3600	4–2 1/2–5.1	Y	NP-90680	5	Eat A5-1350	SFd	H	5.83–8.81	Own T-346	O4IHV	432	604	e	TX	60	2 1/2x2 3/4 x8 1/2	C
12	C-1-JM6	2406	108	162	17750	4757	7.50/20D	9.00/20	Own T-358	6–3 1/2 x4.8	265	7.0	216	114–3600	4–2 1/2–5.1	Y	NP-90720	5	Own T-358	HyF	H	6.29–6.83	Own T-358	O4IHV	432	604	e	TX	60	2 1/2x2 3/4 x8 1/2	C
13	C-1-JMA6	2620	108	162	17750	4875	7.50/20D	9.00/20	Own T-358	6–3 1/2 x4.8	265	7.0	216	114–3600	4–2 1/2–5.1	Y	NP-90720	5	Eat A5-1350	SFd	H	5.83–8.81	Own T-358	O4IHV	432	604	e	TX	60	2 1/2x2 3/4 x8 1/2	C
14	C-1-J8	▲2298	129	171	17500	4675	7.50/20D	9.00/20	Own VT-346	8–3 1/8 x3 1/4	241	7.5	220	133–3800	5–2 3/8–4.8	N	NP-90680	5	Own VT-346	HyF	H	6.29–6.83	Own VT-346	O4IHV	432	604	e	TX	60	2 1/2x2 3/4 x8 1/2	C
15	C-1-JA8	▲2512	129	171	17500	4775	7.50/20D	9.00/20	Own VT-346	8–3 1/8 x3 1/4	241	7.5	220	133–3800	5–2 3/8–4.8	N	NP-90680	5	Eat A5-1350	SFd	H	5.83–8.81	Own VT-346	O4IHV	432	604	e	TX	60	2 1/2x2 3/4 x8 1/2	CP
16	C-1-K6	▲2666	129	171	19000	5580	8.25/20D♦	9.00/20	Own TX-346	6–3 1/2 x4.8	265	7.0	228	136●3600	4–2 1/2–5.1	Y	NP-90150	5	Own T-346	HyF	H	6.8 –7.2	Own TX-346	O4IHV	432	604	e	TX	60	2 1/2x2 3/4 x8 1/2	CP
17	C-1-KA6	▲2908	129	171	19000	5525	8.25/20D♦	9.00/20	Own TX-346	6–3 1/2 x4.8	265	7.0	228	136●3600	4–2 1/2–5.1	Y	NP-90150	5	Eat 16500	SFd	H	6.14–9.04	Own TX-346	O4IHV	432	604	e	TX	60	2 1/2x2 3/4 x8 1/2	CP
18	C-1-KMA6	3128	108	162	19000	5500	8.25/20D♦	9.00/20	Own TX-358	6–3 1/2 x4.8	265	7.0	216	114–3600	4–2 1/2–5.1	Y	NP-90720	5	Own T-358	HyF	H	6.8 –7.2	Own TX-358	O4IHV	432	604	e	TX	60	2 1/2x2 3/4 x8 1/2	CP
19	C-1-K8	▲2786	129	171	19000	5630	8.25/20D♦	9.00/20	Own VTX-346	8–3 1/8 x3 1/4	241	7.5	220	133–3800	5–2 3/8–4.8	N	NP-90150	5	Own T-101	HyF	H	6.8 –7.2	Own TX-346	O4IHV	432	604	e	TX	60	2 1/2x2 3/4 x8 1/2	CP
20	C-1-KA8	▲3028	129	171	19000	5525	8.25/20D♦	9.00/20	Own VTX-346	8–3 1/8 x3 1/4	241	7.5	220	133–3800	5–2 3/8–4.8	N	NP-90150	5	Eat 16500	SFd	H	6.14–9.04	Own TX-346	O4IHV	432	604	e	TX	60	2 1/2x2 3/4 x8 1/2	CP
21	C-1-R8	▲3426	132	174	19500	5540	7.50/20D■	9.00/20	Own VT-348	8–3 1/8 x3 1/4	331	7.0	268	153–3600	5–2 1/2–5.1	Y	NP-90040	5	Own T-101	HyF	H	6.8 – 7.2	Own VT-348	OT4IHV	397	610	e	TX	60	2 1/2x2 3/4 x9 1/2	C
22	C-1-RA8	▲3693	132	174	19500	5445	7.50/20D♦	9.00/20	Own VT-348	8–3 1/8 x3 1/4	331	7.0	268	153–3600	5–2 1/2–5.1	Y	NP-90040	5	Own T-300	HyF	H	6.8 –7.2	Own VT-348	OT4IHV	425	666	e	TX	60	1/4 x3x10	C
23	C-1-T8	▲3933	132	192	22000	7050	8.25/20D♦	10.00/20	Own VT-350	8–3 1/8 x3 1/2	331	7.0	294	172–4000	5–2 1/2–5.1	Y	NP-90030	5	Own T-300	HyF	H	6.8 –7.2	Own T-342	OT4IHV	425	666	e	TX	60	1/4 x3x10	C
24	C-1-TA8	▲4228	132	192	22000	7200	8.25/20D♦	10.00/20	Own VT-350	8–3 1/8 x3 1/2	331	7.0	294	172–4000	5–2 1/2–5.1	Y	NP-90030	5	Own L-100	HyF	H	** –7.8	Own T-344	OT4IHV	425	666	e	TX	60	1/4 x3x10	C
25	C-1-V8	▲4242	132	192	24000	7100	9.00/20D†	11.00/20	Own VTX-350	8–3 1/8 x3 1/2	331	7.0	294	172–4000	5–2 1/2–5.1	Y	NP-90030	5	Own L-300	SFd	H	6.63–9.93	Own T-346	OT4IHV	486	770	e	TX	60	1/4 x3x10	C
26	C-1-VA8	▲4562	132	192	24000	7300	9.00/20D†	11.00/20	Own VTX-350	8–3 1/8 x3 1/2	331	7.0	294	172–4000	5–2 1/2–5.1	Y	NP-90030	5	Own Q-300	HyF	H	6.83–7.4	Own T-358	OT4IHV	486	770	e	TX	60	1/4 x3x10	C
27	C-1-Y6	▲4667	130	190	28000	8525	9.00/20D†	11.00/20	Own T-352	6–4 1/8 x5 1/8	413	6.5	343	171–3200	7–3–11.2	Y	Cla 290-V2	5	Own QT-300	SFd	H	6.63–9.93	Own T-346	OT4IHV	486	770	e	TX	60	1/4 x3 1/2 x10	C
28	C-1-YA6	▲4987	130	190	28000	8525	9.00/20D†	11.00/20	Own T-352	6–4 1/8 x5 1/8	413	6.5	343	171–3200	7–3–11.2	Y	Cla 290-V2	5	Own Q-100	HyF	H	6.83–7.4	Tim FD-900	OT4IHV	486	770	e	TX	60	1/4 x3 1/2 x10	C
	(School Bus)																														
29	C-1-FS6	1475	153	153	12000	4010	6.50/20D	7.00/20	Own TS-342	6–3 1/4 x4 3/8	230	7.3	194	110–3600	4–2 1/2–4.8	N	NP-89960	4	Own TS-342	HyF	H	5.63–6.83	Own TS-342	O4IH	336	480	Ce	TX	.....	1/4 x2 1/2 x8 1/2	C
30	C-1-HS6	1768	193	193	16000	4735	7.50/20D	8.25/20	Own TS-344	6–3 1/8 x4 1/2	250	7.0	210	120–3600	4–2 1/2–5.1	Y	NP-89960	4	Own TS-344	HyF	H	6.29–6.83	Own TS-344	O4IHV	336	480	Ce	TX	.....	1/4 x2 1/2 x8 1/2	C
31	C-1-JS6	2427	213	213	17500	5275	7.50/20D	9.00/20	Own TS-346	6–3 1/8 x4.8	265	7.0	225	123–3600	4–2 1/2–5.1	Y	NP-90040	5	Own T-346	HyF	H	6.29–6.83	Own TS-346	O4IHV	432	480	e	TX	.....	1/4 x2 1/2 x8 1/2	C
32	C-1-RS8	3501	231	231	20000	6100	8.25/20D	9.00/20	Own VTS-348	8–3 1/8 x3 3/8	331	7.0	268	153–3600	5–2 1/2–5.1	Y	NP-90040	5	Own T-100	HyF	H	6.8 –7.2	Tim 32516	T4IHV	397	610	e	TX	.....	1/2 x2 3/4 x9 1/2	CP
33	Duplex T	.....	136	220	20000	6600	8.25/20D	9.00/20	Her JXD	6–4x4 1/4	320	6.2	240	113–3000	7–2 1/2x10 1/2	Y	Fu 5B330	5	Tim H100	B	H	** –7.20	Tim 32502	L4IHV	420	654	a	TX	57 3/4	9 1/4 x3 1/2 x 1/8	C
34	TH-404	.....	136	220	20000	6900	8.25/20D	9.00/20	Her WXLC-3	6–4 1/4 x4 3/4	404	5.8	312	139–2600	7–2 3/8x13 1/4	Y	Fu 5A430	5	Tim H-300	DF	H	6.13–8.15	Tim 32502	L4IHV	420	654	a	TX	49 1/4	9 1/4 x3 1/2 x 1/8	CP
35	R	.....	136	220	20000	8820	9.00/20D	10.00/20	Her WXLC-3	6–4 1/4 x4 3/4	404	5.8	312	139–2600	7–2 3/8x13 1/4	Y	Fu 5A43	5	Tim Q300	DF	R	6.42–8.38	Tim FD900	L4IHV	730	1016	a	TX	49 1/4	9 1/4 x3 1/2 x 1/8	CP
36	SH-529	.....	172	208	28000	9500	10.00/20	11.00/20	Her RXC	6–4 5/8 x5 1/4	529	5.4	395	132–2300	7–3x13 1/4	Y	Fu 5A620	5	Tim Q200	2F	R	** –7.77	Tim FD900	BW4IA	730	1016	a	TX	61 1/4	9 1/4 x3 1/2 x 1/8	P
37	L-6602	.....	164	200	37000	11650	11.00/20D	11.00/20	Con R6602	6–4 5/8 x5 1/2	602	6.1	465	200–2600	7–3 1/4 x14 3/8	Y	Fu 5C650	5	Tim U200	DF	R	** –9.83	Tim FE900	BW4IA	912	1311	a	TX	73 1/4	10 1/2 x3	x 1/8	P
38	KH	.....	148	220	34000	10500	11.00/20D	11.00/20	Her RXC	6–4 5/8 x5 1/4	529	5.4	395	132–2300	7–3x13 1/4	Y	Fu 5A620	5	Tim U-200	2F	R	** –9.83	Tim FE900	BW4IA	912	1311	a	TX	60 3/4	10 1/2 x3	x 1/8	P
39	LH	.....	148	220	37000	11300	11.00/20D	11.00/20	Her RXLD	6–4 3/4 x5 1/4	558	5.4	430	154–2400	7–3 1/2x13 1/4	Y	Fu 5C650	5	Tim U-200	2F	R	** –9.83	Tim FE900	BW4IA	912	1311	a	TX	60 3/4	10 1/2 x3	x 1/8	P
40	Federal 1801	.....	136	250	19000	5760	8.25/20D	9.00/20	Her JXBF	6–3 5/8 x4 1/4	263	6.5	201	109–3200	7–2 1/4x10 1/2	N	WG T97‡	4	Tim E100DPH	8F	H	** –6.80	Tim 30003H	LT4IHV	348	556	a	TX	60 1/2	9 1/4 x3x 1/8	T
41	1802	.....	136	250	19000	5890	8.25/20D	9.00/20	Her JXBF	6–3 5/8 x4 1/4	263	6.5	201	109–3200	7–2 1/2x10 1/2	N	WG T97‡	4	Tim E300DPH	dF	H	6.13–8.10	Tim 30003H	LT4IHV	348	556	a	TX	60 1/2	9 1/4 x3x 1/8	T
42	2501	.....	136	250	21000	6025	8.25/20D	9.00/20	Her JXCF	6–3 1/2 x4 1/4	282	6.5	220	113–3200	7–2 1/2x10 1/8	N	Cla 250V‡	4	Tim H100DPH	8F	H	** –7.20	Tim 31117H	LT4IHV	380	603	a	TX	60 1/2	9 1/4 x3x 1/8	T
43	2502	.....	136	250	21000	6105	8.25/20D	9.00/20	Her JXCF	6–3 1/2 x4 1/4	282	6.5	220	113–3200	7–2 1/2x10 1/8	N	Cla 250V‡	4	Tim H300DPH	dF	H	6.13–8.15	Tim 31117H	LT4IHV	380	603	a	TX	60 1/2	9 1/4 x3x 1/8	T
44	2901	.....	136	250	24000	6535	9.00/20D	10.00/20	Her JXDF	6–4x4 1/4	320	6.5	254	125–3200	7–2 1/2x10 1/2	Y	Cla 205V‡‡	5	Tim L100DPH	8F	H	** –7.40	Tim 32514H	LT4IHV	466	820	a	TX	60 1/2	9 1/4 x3x 1/8	T
45	2902	.....	136	250	24000	6695	9.00/20D	10.00/20	Her JXDF	6–4x4 1/4	320	6.5	254	125–3200	7–2 1/2x10 1/2	Y	Cla 205V‡‡	5	Tim L300DPH	dF	H	6.32–8.22	Tim 32514H	LT4IHV	466	820	a	TX	60 1/2	9 1/4 x3x 1/8	T
46	3001	.....	136	250	24000	6575	9.00/20D	10.00/20	Her JXLDF	6–4x4 1/4	339	6.5	288	142–3200	7–2 1/2x10 1/2	Y	Cla 205V‡‡	5	Tim L100DPH	8F	H	** –6.83	Tim 32514H	LT4IHV	466	820	a	TX	60 1/2	9 1/4 x3x 1/8	T
47	3002	.....	136	250	24000	6735	9.00/20D	10.00/20	Her JXLDF	6–4x4 1/4	339	6.5	288	142–3200	7–2 1/2x10 1/2	Y	Cla 205V‡‡	5	Tim L300DPH	dF	H	6.32–8.22	Tim 32514H	LT4IHV	466	820	a	TX	60 1/2	9 1/4 x3x 1/8	T
48	3401	.....	136	250	25000	7250	9.00/20D	10.00/20	Con T6371F	6–4 1/4 x4 3/8	371	6.4	297	145–3000	7–2 1/4x13 1/2	Y	Cla 290V‡‡	5	Tim L100DPH	8F	H	** –7.40	Tim 32514H	LT4IHV	466	820	a	TX	60 1/2	9 1/4 x3x 1/8	T
49	3402	.....	136	250	25000	7370	9.00/20D	10.00/20	Con T6371F	6–4 1/4 x4 3/8	371	6.4	297	145–3000	7–2 1/4x13 1/2	Y	Cla 290V‡‡	5	Tim L300DPH	dF	H	6.32–8.22	Tim 32514H	LT4IHV	466	820	a	TX	60 1/2	9 1/4 x3x 1/8	T
50	4401	.....	136	148	30000	7810	10.00/20	11.00/20▲	Con T6427F	6–4 1/8 x4 7/8	427	6.4	350	166–3000	7–2 1/4x13 1/2	Y	Cla 290V‡	5	Tim Q100P	8F	R	** –6.83	Tim FC-900	Tw4IA	522	848	a	TD	60 1/2	9 1/4 x3x 1/8	T
51	4402	.....	136	148	30000	8020	10.00/20	11.00/20▲	Con T6427F	6–4 1/8 x4 7/8	427	6.4	350	166–3000	7–2 1/4x13 1/2	Y	Cla 290V‡	10	Tim Q300P	dF	R	6.42–8.38	Tim FC-900	Tw4IA	522	848	a	TD	60 1/2	9 1/4 x3x 1/8	T
52	Sch. Bus 1821	.....	136	250	19000	.....	8.25/20D	9.00/20	Her JXCF	6–3 1/2 x4 1/4	282	6.5	220	113–3200	7–2 1/2x10 1/8	Y	WG T97	5	Tim E100DPH	8F		6.20–6.80	Tim 30008-H	LT4IVH	348	556		TX	60 1/2	9 1/4 x3x 1/8	T
53	Sch. Bus 2521	.....	136	250	21000	5410	8.25/20D	9.00/20	Her JXCF	6–3 1/2 x4 1/4	282	6.5	220	113–3200	7–2 1/2x10 1/8	Y	Cla 205V	5	Tim H100DPH	8F		6.80–7.20	Tim 31117-H	LT4IVH	380	603		TX	60 1/2	9 1/4 x3x 1/8	T
54	Sch. Bus 2921	.....	136	250	24000	5920	9.00/20D	10.00/20	Her JXDF	6–4 4 1/4	320	6.5	254	125–3200	7–2 1/2x10 1/2	Y	Cla 205V	5	Tim L100DPH	8F		6.83–7.20	Tim 32514-H	LT4IVH	466	820		TX	60 1/2	9 1/4 x3x 1/8	T
55	Sch. Bus 3021	.....	136	250	24000	5960	9.00/20D	10.00/20	Her JXLDF	6–4x4 1/2	339	6.5	288	142–3200	7–2 1/2x10 1/2	Y	Cla 205V	5	Tim L100DPH	8F		6.83–7.20	Tim 32514-H	LT4IVH	466	820		TX	60 1/2	9 1/4 x3x 1/8	T
56	Sch. Bus 3421	.....	136	260	25000	6595	9.00/20D	10.00/20	Con T6371F	6–4 1/4 x4 3/8	371	6.4	296	145–3000	7–2 1/4x13 1/2	Y	Cla 290V	5	Tim L100DPH	8F		6.83–7.20	Tim 32514-H	LT4IVH	466	820		TX	60 1/2	9 1/4 x3x 1/8	T
	Ford Courier																														
57	Sedan Divy.	.....	115	115	4600	3205	6.70/15S	7.10/15S	Own	6–3.62x3.6	223	7.2	193	115–3900	4–2 1/2x3 1/8	...	Own	3	Own	H 1/2	H	4.09–4.27	Own	O4IH	159	259	...	21M	.....	4x2x 1/8	T
58	Sedan Divy.	.....	115	115	4600	3307	6.70/15S	7.10/15S	Own	8–3 1/2x3.1	239	7.2	214	130–4200	5–2 1/2x3 1/8	...	Own	3	Own	H 1/2	H	4.09–4.27	Own	O4IH	159	259	...	21M	.....	4x2x 1/8	T
	F-100																														
59	Cowl	.....	110	110	4800	2252	6.00/16S	6.50/16S	Own	6–3.62x3.6	223	7.2	193	115–3900	4–2 1/2x3 1/8	...	Own	3	Own	H 1/2	H	3.92–4.27	Own	O4IH	179	259	...	21M	41	5 1/8 x2 1/4 x 1/8	C
60	Cowl	.....	110	110	4800	2352	6.00/16S	6.50/16S	Own	8–3 1/2x3.1	239	7.2	214	130–4200	5–2 1/2x3 1/8	...	Own	3	Own	H 1/2	H	3.92–4.27	Own	O4IH	179	259	...	21M	41	5 1/8 x2 1/4 x 3/8	C
	F-250																														
61	Cowl	.....	118	118	6900	2628	6.50/16S	7.50/17S	Own	6–3.62x3.6	223	7.2	193	115–3900	4–2 1/2x3 1/8	...	Own	3	Own	HF	H	** –4.86	Own	O4IH	196	302	...	TX	49	6x2 1/4 x 1/8	C
62	Cowl	.....	118	118	6900	2728	6.50/16S	7.50/17S	Own	8–3 1/2x3.1	239	7.2	214	130–4200	5–2 1/2x3 1/8	...	Own	3	Own	HF	H	** –4.86	Own	O4IH	196	302	...	TX	49	6x2 1/4 x 1/8	C
	F-350																														
63	Cowl	.....	130	130	9500	3083	7.00/17S	7.50/16	Own	6–3.62x3.6	223	7.2	193	115–3900	4–2 1/2x3 1/8	...	Own	3	Own	HF	H	5.14–5.83	Own	O4IH	231	355	...	TX	61	7x2 3/4 x 1/2	C
64	Cowl	.....	130	130	9500	3183	7.00/17S	7.50/16	Own	8–3 1/2x3.1	239	7.2	214	130–4200	5–2 1/2x3 1/8	...	Own	3	Own	HF	H	5.14–5.83	Own	O4IH	231	355	...	TX	61	7x2 3/4 x 1/2	C
	F-500																														
65	Cab	.....	130	154	14000	▲4170	6.50/20D	7.50/20	Own	6–3.62x3.6	223	7.2	193	115–3900	4–2 1/2x3 1/8	...	Own	4	Own	HF	H	6 2 –6.8	Own	O4IH	323	494	...	TX	61	7x2 3/4 x 1/2 △	C
66	Cab	.....	130	154	14000	▲4270	6.50/20D	7.50/20	Own	8–3 1/2x3.1	239	7.2	214	130–4200	5–2 1/2x3 1/8	...	Own	4	Own	HF	H	6 2 –6 8	Own	O4IH	323	494	...	TX	61	7x2 3/4 x 1/2 △	C
	F-600																														
67	Cab	.....	130	172	16000	▲4695	7.50/20D	8.25/20	Own	8–3 1/2x3.1	239	7.2	214	130–4200	5–2 1/2x3 1/8	...	Own	4	Own	HF	H	6 8 –7 2	Own	O4IH	366	561	...	TX	61	8 1/4 x2 1/4 x 1/4	C
68	Cab	.....	130	172	16000	▲4715	7.50/20D	8.25/20	Own	8–3.62x3.1	256	7.2	226	138–3900	5–2 1/2x3 1/8	...	Own	4	Own	HF	H	6.8 –7.2	Own	O4IH	366	561	...	TX	61	8 1/4 x2 1/8 x 3/4	C
	F-700																														
69	Cab	.....	132	192	19500	▲5385	7.50/20D	9.00/20	Own	8–3.62x3.1	256	7.2	226	138–3900	5–2 1/2x3 1/8	Y	Own	4	Own	HF	H	** –7 2	Own	O4IH	444	697	...	TX	61	9x3x 1/4 □	L
	F-750																														
70	Cab	.....	132	192	19500	▲5830	8.25/20D	9.00/20	Own	8–3.56x3 1/2	279	7.2	246	152–3800	5–2 1/2x4 1/8	Y	Own	5	Own	HF	H	** –7.2	Own	O4IH	444	697	...	TX	61	9x3x 1/4	L

(Turn to Page 156, Please)

For Key to References and Abbreviations See Page 151

The best costs less than the rest...

HEIN-WERNER

—the lowest priced major line of hydraulic jacks

Unbelievable but true! Hein-Werner Hydraulic Jacks—quality standard of the industry—are priced lower than any other major line. Starting at only $8.80, the complete line includes models of 1½, 3, 5, 8, 12, 20, 30, 50, and 100 tons capacity.

You owe it to yourself to compare them dollar-for-dollar and feature-for-feature with any other jacks on the market. You'll find them the best buy . . . by far! And remember, Hein-Werner manufactures and sells more hydraulic jacks than any other company in the world today.

See your H-W jobber or write us

LOOK AT THESE VALUE-PACKED FEATURES:

- **Pressure Tested Castings**
- **Extra Large Base**
- **Positive Action Release Valve**
- **Circular Grooved Ram Head**
- **Center-Balanced Malleable Handle Socket**
- **Vertical or Horizontal Positioning**
- **Safety By-Pass to Prevent Over-Travel of Ram**
- **Factory Tested at 1½ Times Rated Capacity**

HEIN-WERNER CORPORATION
WAUKESHA, WISCONSIN

Hein-Werner HYDRAULIC JACKS

The complete Hein-Werner line of hydraulic jacks includes: Under-Axle Jacks of 1½ to 100 tons capacity . . . "Bumper-Lift" Jacks for passenger cars . . . "Swift-Lift" and Service Jacks for shop use . . . Adjustable Car Stands . . . "Push and Pull" and "Pushmaster" Jacks for body, fender, and frame repair work.

(Continued from Page 154)

Line Number	Make and Model	Chassis List Price	Wheelbase Minimum Standard	Wheelbase Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	Tire Sizes (D-dual rear, S-single rear) Standard Front and Rear	Tire Sizes Maximum Authorized Tire Size (Duals unless noted)	Engine Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number Diameter and Length	Governor Standard	Transmission Make and Model	Forward Speeds	Rear Axle Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	Front Axle Make and Model	Brakes Service Make Location Type Operation	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	Frame Side Rail Dimensions	Frame Type
	Ford-Cont'd																														
	F-800																														
1	Cab	......	132	192	22000	▲6380	9.00/20D	10.00/20	Own	8-3.8x3½	317	7.2	286	170-3900	5-2⅝x4 3/16	Y	Own	5	Own	SF	H	7.17-7.67	Own	O4IH	485	729	...	TX	61	9x3x¼	L
	F-900																														
2	Cab	......	132	192	27000	▲6600	10.00/20D	11.00/22•	Own	8-3.8x3½	317	7.2	286	170-3900	5-2⅝x4 3/16	Y	Own	5	Own	SF	H	** -7.67	Own	O4IH	542	829	...	TX	61	9x3x¼	L
	T-700 Tandem																														
3	Cab	......	144	192	27000	▲7475	7.50/20D	8.25/20	Own	8-3.62x3.1	256	7.2	226	138-3900	5-2½x3 11/16	Y	Own	5	Own	HF	H	6.7 -7.79	Own	O6IH	625	980	...	TX	73	9x3x¼	L
4	Cab	......	144	192	27000	▲7715	7.50/20D	8.25/20	Own	8-3.56x3½	279	7.2	246	152-3800	5-2⅝x4 3/16	Y	Own	5	Own	HF	H	6.7 -7.79	Own	O6IH	625	980	...	TX	73	9x3x¼	L
	T-800 Tandem																														
5	Cab	......	144	192	40000	▲9555	9.00/20D	10.00/20	Own	8-3.8x3½	317	7.2	286	170-3900	5-2⅝x4 3/16	Y	Own	5	Own	SF	H	7.8-8.6	Own	O6IH	837	1232	...	TX	73	9¼x3½x⅜	L
	C-500 C. F.																														
6	Cab	......	110	158	14000	▲4460	6.50/20D	7.50/20	Own	8-3½x3.1	239	7.2	214	130-4200	5-2½x3 11/16	..	Own	4	Own	HF	H	6.2 -6.8	Own	O4IH	323	494	...	TX	60	8⅞x2⅞x¼	C
	C-600 C. F.																														
7	Cab	......	110	158	16000	▲4750	7.50/20D	8.25/20	Own	8-3½x3.1	239	7.2	214	130-4200	5-2½x3 11/16	..	Own	4	Own	HF	H	6.8 -7.2	Own	O4IH	366	561	...	TX	60	8⅞x2⅞x¼	C
8	Cab	......	110	158	16000	▲4770	7.50/20D	8.25/20	Own	8-3.62x3.1	256	7.2	226	138-3900	5-2½x3 11/16	Y	Own	4	Own	HF	H	6.8 -7.2	Own	O4IH	366	561	...	TX	60	8⅞x2⅞x¼	C
	C-700 C. F.																														
9	Cab	......	116	156	19500	▲5685	7.50/20D	9.00/20	Own	8-3.62x3.1	256	7.2	226	138-3900	5-2½x3 11/16	Y	Own	4	Own	HF	H	** -7.2	Own	O4IH	444	697	...	TX	66	9x3x¼	L
	C-750 C. F.																														
10	Cab	......	116	156	19500	▲6035	8.25/20D	9.00/20	Own	8-3.56x3½	279	7.2	246	152-3800	5-2⅝x4 3/16	Y	Own	5	Own	HF	H	** -7.2	Own	O4IH	444	697	...	TX	66	9x3x¼	L
	C-800 C. F.																														
11	Cab	......	116	156	23000	▲6435	9.00/20D	10.00/20	Own	8-3.8x3½	317	7.2	286	170-3900	5-2⅝x4 3/16	Y	Own	5	Own	SF	H	7.17-7.67	Own	O4IH	485	729	...	TX	66	9x3x¼	L
	C-900 C. F.																														
12	Cab	......	116	156	27000	▲6815	10.00/20D	11.00/22•	Own	8-3.8x3½	317	7.2	286	170-3900	5-2⅝x4 3/16	..	Own	5	Own	SF	H	** -7.67	Own	O4IH	542	829	...	TX	66	9x3x¼	L
	P-350 Parcel Divy.																														
13	W/S	......	104	122	7800	2993	7.00/16S	7.50/17S	Own	6-3.62x3.6	223	7.2	193	115-3900	4-2½x3 11/16	..	Own	3	Own	HF	H	** -4.86	Own	O4IH	196	302	...	TX	88▼	6x2¼x3/16	C
	P-500 Parcel Divy.																														
14	W/S	......	130	130	14000	4025	7.00/18■	7.50/20	Own	6-3.62x3.6	223	7.2	193	115-3900	4-2½x3 11/16	..	Own	3	Own	HF	H	6.2 -6.8	Own	O4IH	323	494	...	TX	114▼	8⅞x2⅞x¼	C
	B-500 School Bus																														
15	Bus Ch.	......	154	154	12000	3900	6.50/20D	7.50/20	Own	6-3.62x3.6	223	7.2	193	115-3900	4-2½x3 11/16	..	Own	4	Own	HF	H	6.2 -6.8	Own	O4IH	323	494	...	TX	128▼	8⅞x2⅞x¼	C
16	Bus Ch.	......	154	154	12000	4000	6.50/20D	7.50/20	Own	8-3½x3.1	239	7.2	214	130-4200	5-2½x3 11/16	..	Own	4	Own	HF	H	6.2 -6.8	Own	O4IH	323	494	...	TX	128▼	8⅞x2⅞x¼	C
	B-600 School Bus																														
17	Bus Ch.	......	192	210	*16000	4510	7.50/20D	8.25/20	Own	6-3.62x3.6	223	7.2	193	115-3900	4-2½x3 11/16	..	Own	4	Own	HF	H	6.8 -7.2	Own	O4IH	366	561	...	TX	166▼	8 11/16x2⅞x5/32	C
18	Bus Ch.	......	192	210	*16000	4610	7.50/20D	8.25/20	Own	8-3½x3.1	239	7.2	214	130-4200	5-2½x3 11/16	..	Own	4	Own	HF	H	6.8 -7.2	Own	O4IH	366	561	...	TX	166▼	8 11/16x2⅞x5/32	C
19	Bus Ch.	......	192	210	*16000	4630	7.50/20D	8.25/20	Own	8-3.62x3.1	256	7.2	226	138-3900	5-2½x3 11/16	..	Own	4	Own	HF	H	6.8 -7.2	Own	O4IH	366	561	...	TX	166▼	8 11/16x2⅞x5/32	C
	B-700 School Bus																														
20	Bus Ch.	......	233	233	19500	5615	7.50/20D	9.00/20	Own	8-3.62x3.1	256	7.2	226	138-3900	5-2½x3 11/16	..	Own	4	Own	HF	H	** -7.2	Own	O4IH	444	697	...	TX	205▼	9x3x¼	L
	B-750 School Bus																														
21	Bus Ch.	......	233	233	20000	5985	8.25/20D	9.00/20	Own	8-3.56x3½	279	7.2	246	152-3800	5-2⅝x4 11/16	..	Own	5	Own	HF	H	** -7.2	Own	O4IH	444	697	...	TX	205▼	9x3x¼	L
22	Kenworth(D)• .521	......	153½	255	28000	12500	10.00/20	11.00/22	Cum HRB-600	6-5⅛x6	743	16.	540	165-1800	7-4½x16 3/16	Y	BL 8241	4	Tim U200P	H2F	H	5.91-9.76	TimFe900DPA	Ws4IA	722	1174	a	TD	67¾	9⅛x3¼x5/16	C
23	.585	......	153½	255	35000	11600	10.00/20	11.00/22	LeR H540	8-4½x4¼	540	6.7	460	200-2600	7-3x13 11/16	Y	Fu 5C650	5	Tim U200P	H2F	H	5.91-9.76	TimFe900DPA	Ws4IA	648	1168	a	TD	67¾	9⅛x3¼x5/16	C
24	(D) .801	......	158½	....	73400	37400	†	†	Cum NHBID-600	6-5⅛x6	743	16.	535	200-2100	7-4½x13 11/16	Y	Fu 10F1220	10	Own	H2F	R	**-19.23	Tim Fu900	Ws4IA	1298	1870	C	FD	.....	....	C
25	Linn A-15	......	120	....	9000	6000	7.50/20S	8.25/20S	Her JXE3	6-3½x4¼	245	6.5	184	91-3200	7-2½x10 11/16	Y	WGT9	4	Own 601	N	N	None	Tim F30B28H	L4IH	306	478	a	T	.....	None	....
26	A-25	......	156	....	11200	6200	7.50/20S	8.25/20	Her JXE3	6-3½x4¼	245	6.5	184	91-3200	7-2½x10 11/16	Y	WGT9	4	Own 601	N	N	None	Tim F30B28H	L4IH	306	478	a	X	.....	None	....
27	A-35	......	169	....	14700	7900	7.50/20D	8.25/20	Her JXC	6-3¾x4¼	282	6.7	207	103-3200	7-2½x10 11/16	Y	WGT9	4	Own 602T	N	N	None	Tim F35	L6IH	486	744	a	X	.....	None	....
28	A-45	......	205	....	16900	8100	7.50/20D	8.25/20	Her JXC	6-3¾x4¼	282	6.7	207	103-3200	7-2½x10 11/16	Y	WGT9	4	Own 602T	N	N	None	Tim F35	L6IH	486	744	a	X	.....	None	....
29	Mar. Her. DVL-4	......	90	118	6750	......	7.50/16S	8.25/18S	Willys MB	4-3⅛x4⅜	134	6.4	105	60-4000	3-2.33x5.48	Y	Own	3	(Front Drive)	...		7.10	Own	4IH	202	327	M2	....	.....	None	....
30	Peterbilt(D) 280	......	175	Opt	27000	12500	10.00/20D	11.00/22	Cum NHB600	6-5⅛x6	743	17.	500	200-2100	7-4½x16½	Y	Spi 8041	12	TimR-230DPA	2F	R	5.91-6.51	TimFe900DPA	Ws4IA	738	1052	...	TD	86½	10⅜x3¼x7/32	CT
31	280(coe)	......	120	Opt	27000	......	10.00/20	11.00/22	Cum NHB600	6-5⅛x6	743	17.	500	200-2100	7-4½x16½	Y	Spi 8041	12	TimR-230DPA	2F	R	5.91-6.51	TimFe900DPA	Ws4IA	738	1052	...	TD	69½	10⅜x3¼x7/32	CT
32	Reo F-14-1	......	130	172	14000	4140	6.50/20	7.50/20	Int 240	6-3 9/16x4 1/64	240	6.5	192	108-3600	4-2¾x6 1/16	N	WG T98	4	Tim C-100	HF	H	6.2 -6.8	Int F-360	WG4IVH	294	437	var	TX	65⅝	8 3/16x3x7/32	T
33	F-14-2	......	130	172	15000	4330	6.50/20	7.50/20	Int 240	6-3 9/16x4 1/64	240	6.5	192	108-3600	4-2¾x6 1/16	N	WG T98	4	Tim C-100	HF	H	6.2 -6.8	Int F-360	WG4IVH	294	437	var	TX	65⅝	8 3/16x3x7/32	T
34	F-14R	......	130	172	16000	4185	7.00/20	8.25/20	Int 240	6-3 9/16x4 1/64	240	6.5	192	108-3600	4-2¾x6 1/16	N	WG T98	4	Tim E-100	HF	H	6.2 -6.8	Int F-360	WG4IVH	294	437	var	TX	65⅝	8 3/16x3x7/32	T
35	F-14RT	......	130	130	16000	4490	7.00/20	8.25/20	Int 240	6-3 9/16x4 1/64	240	6.5	192	108-3600	4-2¾x6 1/16	N	WG T98	4	Tim E-300	HFd	H	6.13-8.10	Int F-360	WG4IVH	294	437	var	TX	65⅝	8 3/16x3x7/32	T
36	F-20-1	......	125	185	16000	4575	7.50/20	8.25/20	Own 255♦	6-3⅝x4⅛	255	6.7	189	107-3400	7-2½x9.408	Y	WG-T98	4	Tim E-100♦	HF	H	6.2 -6.8	Tim 30000	LT4IVH	340	534	var	TX	60⅝	8 11/16x2 11/16x7/32	T
37	F-20-2	......	125	185	17000	4575	7.50/20	8.25/20	Own 255♦	6-3⅝x4⅛	255	6.7	189	107-3400	7-2½x9.408	Y	WG-T98	4	Tim E-100♦	HF	H	6.2 -6.8	Tim 30000	LT4IVH	340	534	var	TX	60⅝	8 11/16x2 11/16x7/32	T
38	F-20-3	......	125	185	18000	4805	7.50/20	9.00/20	Own 255♦	6-3⅝x4⅛	255	6.7	189	107-3400	7-2½x9.408	Y	WG-T98	4	Tim E-100♦	HF	H	6.2 -6.8	Tim 31104	LT4IVH	344	584	var	TX	60⅝	8 11/16x2 11/16x7/32	T
39	F-20T	......	125	125	16000	5115	8.25/20	9.00/20	Own 255♦	6-3⅝x4⅛	255	6.7	189	107-3400	7-2½x9.408	Y	WG-T98	4	Tim E-300	HFd	H	6.13-8.10	Tim 30000	LT4IVH	340	534	var	TX	60⅝	8 11/16x2 11/16x7/32	T
40	F-22-1	......	130	185	20000	5780	9.00/20	10.00/20	Own 292♦	6-3⅞x4⅛	292	6.5	224	124-3300	7-2½x9.408	Y	Cla 205V	5	Tim H-100Δ	HF	H	6.16-6.8	Tim 31104	LT4IVH	376	640	var	TX	65⅝	9x3x¼	T
41	F-22-2	......	130	185	21000	5780	9.00/20	10.00/20	Own 292♦	6-3⅞x4⅛	292	6.5	224	124-3300	7-2½x9.408	Y	Cla 205V	5	Tim H-100Δ	HF	H	6.16-6.8	Tim 31104	LT4IVH	376	640	var	TX	65⅝	9x3x¼	T
42	F-22-3	......	130	185	21000	5815	9.00/20	10.00/20	Own 292♦	6-3⅞x4⅛	292	6.5	224	124-3300	7-2½x9.408	Y	Cla 205V	5	Tim H-100Δ	HF	H	6.16-6.8	Tim 31104	LT4IVH	376	640	var	TX	65⅝	9x3x¼	T
43	F-22T	......	130	130	20000	6175	9.00/20	10.00/20	Own 292♦	6-3⅞x4⅛	292	6.5	224	124-3300	7-2½x9.408	Y	Cla 205V	5	Tim H-300Δ	HFd	H	6.67-8.85	Tim 31104	LT4IVH	376	640	var	TX	65⅝	9x3x¼	T
44	F-22R-1	......	130	185	22000	6230	10.00/20	10.00/22	Own 331♦‡	6-4⅛x4⅛	331	6.4	264	140-3200	7-2½x9.408	Y	Cla 205V	5	Tim L-100Δ	HF	H	6.16-7.4	Tim 32500	LT4IVH	438	748	var	TX	65⅝	9x3x¼	T
45	F-22R-2	......	130	185	24000	6230	10.00/20	10.00/22	Own 331♦‡	6-4⅛x4⅛	331	6.4	264	140-3200	7-2½x9.408	Y	Cla 205V	5	Tim L-100Δ	HF	H	6.16-7.4	Tim 32500	LT4IVH	438	748	var	TX	65⅝	9x3x¼	T
46	F-22R-3	......	130	185	24000	6500	10.00/20	10.00/22	Own 331♦‡	6-4⅛x4⅛	331	6.4	264	140-3200	7-2½x9.408	Y	Cla 205V	5	Tim L-100Δ	HF	H	6.16-7.4	Tim FD900	LT4IVH	496	825	var	TX	65⅝	9x3x¼	T
47	F-22RT	......	130	130	22000	6705	10.00/20	10.00/22	Own 331♦‡	6-4⅛x4⅛	331	6.4	264	140-3200	7-2½x9.408	Y	Cla 205V	5	Tim L-300Δ	HFd	H	6.36-8.28	Tim 32500	LT4IVH	438	748	var	TX	65⅝	9x3x¼	T
48	F-22S-1	......	130	185	25000	7035	10.00/20	11.00/20	Own 331♦	6-4⅛x4⅛	331	6.4	264	140-3200	7-2½x9.408	Y	Cla 205V	5	Tim Q-100Δ	HF	H	6.16-6.83	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9⅛x3 5/16x5/16	T
49	F-22S-2	......	130	185	26000	7035	10.00/20	11.00/20	Own 331♦	6-4⅛x4⅛	331	6.4	264	140-3200	7-2½x9.408	Y	Cla 205V	5	Tim Q-100Δ	HF	H	6.16-6.83	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9⅛x3 5/16x5/16	T
50	F-22S-3	......	130	185	26000	7105	10.00/20	11.00/20	Own 331♦	6-4⅛x4⅛	331	6.4	264	140-3200	7-2½x9.408	Y	Cla 205V	5	Tim Q-100Δ	HF	H	6.16-6.83	Tim FE900	TWs4IA	620	928	var	TX	65⅝	9⅛x3 5/16x5/16	T
51	F-22ST	......	130	130	25000	7335	10.00/20	11.00/20	Own 331♦	6-4⅛x4⅛	331	6.4	264	140-3200	7-2½x9.408	Y	Cla 205V	5	Tim Q-300Δ	HFd	H	6.42-8.38	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9⅛x3 5/16x5/16	T
52	F-50-1	......	130	185	26000	7090	10.00/20	11.00/20	Own 160	6-4⅛x4⅛	331	6.7	290	160-3200	7-2¾x9 1/16	Y	Cla 265V	5	Tim Q-100	HF	H	6.16-6.83	Tim FD-900	TWs4IA	620	928	var	TX	65⅝	9⅛x3 5/16x5/16	T
53	F-50-2	......	130	185	28000	7090	10.00/20	11.00/20	Own 160	6-4⅛x4⅛	331	6.7	290	160-3200	7-2¾x9 1/16	Y	Cla 265V	5	Tim Q-100	HF	H	6.16-6.83	Tim FD-900	TWs4IA	620	928	var	TX	65⅝	9⅛x3 5/16x5/16	T
54	F-50-3	......	130	185	28000	7160	10.00/20	11.00/20	Own 160	6-4⅛x4⅛	331	6.7	290	160-3200	7-2¾x9 1/16	Y	Cla 265V	5	Tim Q-100	HF	H	6.16-6.83	Tim FE-900	TWs4IA	620	928	var	TX	65⅝	9⅛x3 5/16x5/16	T
55	F-50-T	......	130	130	26000	7450	10.00/20	11.00/20	Own 160	6-4⅛x4⅛	331	6.7	290	160-3200	7-2¾x9 1/16	Y	Cla 265V	5	Tim QT-300	HFd	H	6.36-8.61	Tim FD-900	TWs4IA	620	928	var	TX	65⅝	9⅛x3 5/16x5/16	T
56	F-23-1	......	130	185	26000	7390	10.00/20	11.00/22	Con T6427	6-4 9/16x4⅜	427	6.4	348	163-2800	7-2⅞x12.1	Y	Cla 290V	5	Tim Q-100Δ	HF	H	6.16-6.83	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9⅛x3 5/16x5/16	T
57	F-23-2Q	......	130	185	28000	7390	10.00/20	11.00/22	Con T6427	6-4 9/16x4⅜	427	6.4	348	163-2800	7-2⅞x12.1	Y	Cla 290V	5	Tim Q-100Δ	HF	H	6.16-6.83	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9⅛x3 5/16x5/16	T
58	F-23-2R	......	130	185	30000	7640	10.00/20	11.00/22	Con T6427	6-4 9/16x4⅜	427	6.4	348	163-2800	7-2⅞x12.1	Y	Cla 290V	5	Tim R-100Δ	HF	H	7.4	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9⅛x3 5/16x5/16	T
59	F-23-3	......	130	185	28000	7460	10.00/20	11.00/22	Con T6427	6-4 9/16x4⅜	427	6.4	348	163-2800	7-2⅞x12.1	Y	Cla 290V	5	Tim Q-100Δ	HF	H	6.16-6.83	Tim FE900	TWs4IA	620	928	var	TX	65⅝	9⅛x3 5/16x5/16	T
60	F-23T	......	130	130	26000	7750	10.00/20	11.00/22	Con T6427	6-4 9/16x4⅜	427	6.4	348	163-2800	7-2⅞x12.1	Y	Cla 290V	5	Tim Q-300Δ	HFd	H	6.42-8.38	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9⅛x3 5/16x5/16	T

(Turn to Page 158, Please)

For Key to References and Abbreviations See Page 151

Ford parts in your Fords put profits in your pocket!

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Replace worn linings with **Genuine Ford Brake Linings.** They pass as many as 3,250 tough tests before approved for manufacture. They give you extra safety . . . extra long life.

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KEEP YOUR FLEET ON ITS FEET

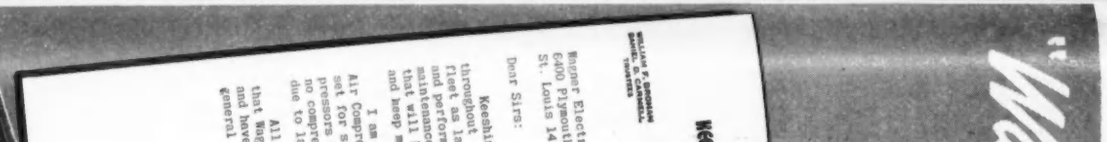
GENUINE Ford PARTS

(Continued from Page 156)

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear: Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number Diameter and Length	Governor Standard	TRANSMISSION: Make and Model	Forward Speeds	REAR AXLE: Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE: Make and Model	BRAKES SERVICE: Make Location Type Operation	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME: Side Rail Dimensions	Type
	Reo—Cont'd																														
1	F-23D-1		130	185	26000	8060	10.00/20	11.00/22	Cum JBS600*	6-4 1/2 x5	401	15.360	150-2500	7-3 1/4 x7.8		Y	Cla 292VO	5	Tim Q-100▲	HF	H	6.16-6.83	Tim FD900	TWs4IA	620	928	var	TX	65 5/8	9 1/4 x3 1/4 x 1/4	T
2	F-23D-2Q		130	185	28000	8060	10.00/20	11.00/22	Cum JBS600*	6-4 1/2 x5	401	15.360	150-2500	7-3 1/4 x7.8		Y	Cla 292VO	5	Tim Q-100▲	HF	H	6.16-6.83	Tim FD900	TWs4IA	620	928	var	TX	65 5/8	9 1/4 x3 1/4 x 1/4	T
3	F-23D-2R		130	185	30000	8315	10.00/20	11.00/20	Cum JBS600*	6-4 1/2 x5	401	15.360	150-2500	7-3 1/4 x7.8		Y	Cla 292VO	5	Tim R-100▲	HF	H	7.4 - . .	Tim FD900	TWs4IA	620	928	var	TX	65 5/8	9 1/4 x3 1/4 x 1/4	T
4	F-23D-3		130	185	28000	8130	10.00/20	11.00/22	Cum JBS600*	6-4 1/2 x5	401	15.360	150-2500	7-3 1/4 x7.8		Y	Cla 292VO	5	Tim Q-100▲	HF	H	6.16-6.83	Tim FE900	TWs4IA	620	928	var	TX	65 5/8	9 1/4 x3 1/4 x 1/4	T
5	F-23DT		130	130	26000	8420	10.00/20	11.00/22	Cum JBS600	6-4 1/2 x5	401	15.360	150-2500	7-3 1/4 x7.8		Y	Cla 292VO	5	Tim QT-300	HFd	H	5.62-7.60	Tim FD900	TWs4IA	620	928	var	TX	65 5/8	9 1/4 x3 1/4 x 1/4	T
6	School bus. F-120L		185	185	18000	5410	7.50/20	9.00/20	Own 255‡	6-3 5/8 x4 1/2	255	6.7	189	107-3400	7-2 1/4 x9	408	Y	WG-T98	4	Tim E-100	HF	H	** -6.8	Tim 31104	LT4IVH	344	584	var	TX	158 3/4	9 1/4 x3 1/4 x 1/4	Tf
7	F-120G		206	206	18000	5600	7.50/20	9.00/20	Own 255‡	6-3 5/8 x4 1/2	255	6.7	189	107-3400	7-2 1/4 x9	408	Y	WG-T98	4	Tim E-100	HF	H	** -6.8	Tim 31104	LT4IVH	344	584	var	TX	179 7/8	9 1/4 x3 1/4 x 1/4	Tf
8	F-120H		224	224	19000	5990	8.25/20	9.00/20	Own 255‡	6-3 5/8 x4 1/2	255	6.7	189	107-3400	7-2 1/4 x9	408	Y	WG-T98	4	Tim E-100	HF	H	** -6.8	Tim 32500	LT4IVH	376	588	var	TX	197 7/8	9 1/4 x3 1/4 x 1/4	Tf
9	F-122H		224	224	21000	6375	8.25/20	10.00/20	Own 292‡	6-3 7/8 x4 1/2	292	6.5	224	124-3300	7-2 1/4 x9	408	Y	Cla 231F	4	Tim H-100	HF	H	6.8 -7.2	Tim 32500	LT4IVH	429	748	var	TX	197 7/8	9 1/4 x3 1/4 x 1/4	Tf
10	F-122J		251	251	21000	6615	8.25/20	10.00/20	Own 292‡	6-3 7/8 x4 1/4	292	6.5	224	124-3300	7-2 1/4 x9	408	Y	Cla 231F	4	Tim H-100	HF	H	6.8 -7.2	Tim 32500	LT4IVH	429	748	var	TX	224 3/8	9 1/4 x3 1/4 x 1/4	Tf
	Sterling																														
11	▼▼(T) . . TB1301T		143	153	26000	▲10375	10.00/20	11.00/22	Wau 140GKB▼▼	6-4 1/2 x5 1/2	525	6.4	425	172-2700	7-3 1/4 x15 1/2		Y	Fu 5A620	5	Tim R100P	FHy	R	3.70-7.40	T FD900DPA	Ws4IA	560	930	a	TX	67	‡‡	A
12	▼▼(T) . . TB1501T		143	153	30000	▲11100	11.00/20	12.00/24†	Wau 140GZB▼▼	6-4 5/8 x5 1/2	555	6.4	450	183-2600	7-3 1/4 x15 1/2		Y	Fu 5C650	5	Tim U200P	2F	R	5.91-9.76	T FE900DPA	Ws4IA	622	1034	a	TX	67	9x3 1/4 x 1/4	A
13	(D)(T) TA1501TD		173	181	30000	▲13125	10.00/20	10.00/22	Cum NHB600	6-5 1/2 x6	743	15.537	200-2100	7-4 1/2 x13	‡‡		Y	Fu4A86-3B65	12	Tim S200P	2F	R	5.91-9.76	Tim FE900DP	Ws4IA	622	1034	a	TX‡	77	‡‡	A
14	(D)(T) TA1511TD		173	181	30000	▲13250	11.00/20	11.00/22	Cum NHB600	6-5 1/2 x6	743	15.537	200-2100	7-4 1/2 x13	‡‡		Y	Fu4A86-3B65	12	Tim S200P	2F	R	5.91-9.76	Tim FE900DP	Ws4IA	622	1034	a	TX‡	77	‡‡	A
15	(D) . . . TA1601D		173	231	32000	▲13650	11.00/20	11.00/22	Cum JBS600	6-5 1/2 x6	743	15.537	200-2100	7-4 1/2 x13			Y	Fu4A86-3A92	12	Tim U200P	2F	R	5.91-9.76	T FE900DPA	Ws4IA	622	1034	a	TX‡	77	9x3 1/4 x 1/4	A
16	(D) . . . TA1611D		173	231	32000	▲13775	11.00/20	11.00/22	Cum NHB600	6-5 1/2 x6	743	15.537	200-2100	7-4 1/2 x13	‡‡		Y	Fu4A86-3A92	12	Tim U200P	2F	R	5.91-9.76	T FE900DPA	Ws4IA	622	1034	a	TX‡	77	9x3 1/4 x 1/4	A
17	HA1101		148	215	22000	▲8825	9.00/20	10.00/20	Wau 6MZA	6-4 1/4 x4 3/4	404	5.6	290	130-3000	7-2 3/8 x12 1/2		Y	Fu 5A43	5	Tim L100DPH	FHy	R	4.11-7.20	Tim 32502H	LT4IHV	374	646	a	TX	67	‡‡	A
18	HA1401		148	215	28000	▲10050	10.00/20	12.00/20‡	Wau 6MZA	6-4 1/4 x4 3/4	404	5.6	290	130-3000	7-2 3/8 x12 1/2		Y	Fu 5A43	5	Tim R200P	2F	R	5.91-10.2	T FD900DPA	Ws4IA	580	930	a	TX	67	9x3 1/4 x 1/4	A
19	HA1601		148	215	32000	▲10825	10.00/20	11.00/24	Wau 6SRKR	6-4 1/2 x5 1/2	517	5.5	369	125-2250	7-3x13 3/8		Y	Fu 5A62	5	Tim S200P	2F	R	5.91-9.76	T FE900DPA	Ws4IA	622	1034	a	TX	67	9x3 1/4 x 1/4	A
20	HA1701		148	215	34000	▲11225	11.00/20	12.00/24†	Wau 6SRKR	6-4 1/2 x5 1/2	517	5.5	369	125-2250	7-3x13 3/8		Y	Fu 5A62	5	Tim U200P	2F	R	5.91-9.76	T FE900DPA	Ws4IA	622	1034	a	TX	67	9 1/4 x3 5/8 x3 5/8	A
21	HB2001		143	211	40000	▲12800	11.00/24	12.00/24	Wau 140GKB	6-4 1/2 x5 1/2	525	6.4	425	172-2700	7-3 1/4 x15 1/2		Y	Fu5A62-3A65	15	Tim 79721	2F	R	7.69-11.3	T FE900DPA	Ws4IA	642	1098	a	TX‡	67	9 1/4 x3 5/8 x3 5/8	A
22	(D) . . HB2001D		153	211	40000	▲14150	11.00/24	12.00/24	Cum HBD600	6-4 1/8 x6	672	17	495	150-1800	7-4 1/2 x13		Y	Fu4A86-3A92	12	Tim 79721	2F	R	7.69-11.3	T FE900DPA	Ws4IA	642	1098	a	TX‡	67	9 1/4 x3 5/8 x3 5/8	A
23	HA1502		148	215	30000	▲10200	10.00/20	12.00/20‡	Wau 6MZA	6-4 1/4 x4 3/4	404	5.6	290	130-3000	7-2 3/8 x12 1/2		Y	Fu 5A43♣	15	Own 1435W	CD	R	6.70-10.8	T FD900DPA	Ws4IA	640	1044	a	JX	67	9x3 1/4 x 1/4	A
24	HA1802		148	215	36000	▲11800	11.00/22	12.00/24	Wau 6SRKR	6-4 3/8 x5 1/2	517	5.5	369	125-2250	7-3x13 3/8		Y	Fu 5A62♣	15	Own 1445W	CD	R	6.70-10.8	T FE900DPA	Ws4IA	680	1082	a	JX	67	9 1/4 x3 5/8 x3 5/8	A
25	HA1803		148	215	36000	▲12100	11.00/22	11.00/24	Wau 6SRKR	6-4 3/8 x5 1/2	517	5.5	369	125-2250	7-3x13 3/8		Y	Fu 5A62♣	15	Own 139W	CD	R	6.70-10.8	T FE900DPA	Ws4IA	680	1082	a	JX	67	9 1/4 x3 5/8 x3 5/8	A
26	HA1813		148	215	36000	▲12450	11.00/22	12.00/24	Wau 6SRKR	6-4 3/8 x5 1/2	517	5.5	369	125-2250	7-3x13 3/8		Y	Fu 5A62♣	15	Own 155W	CD	R	6.70-10.8	T FE900DPA	Ws4IA	680	1082	a	JX	67	9 1/4 x3 5/8 x3 5/8	A
27	HB2002		143	211	40000	▲12850	11.00/24	12.00/24	Wau 140GKB	6-4 1/2 x5 1/2	525	6.4	425	172-2700	7-3 1/4 x15 1/2		Y	Fu 5A62♣	15	Own 160W	CD	R	5.56-9.26	T FE900DPA	Ws4IA	680	1082	a	JX	67	9 1/4 x3 5/8 x3 5/8	A
28	(D) . . HB2002D		153	211	40000	▲14100	11.00/24	12.00/24	Cum HBD600	6-4 1/8 x6	672	17	495	150-1800	7-4 1/2 x13		Y	Fu 4A86††	12	Own 160W	CD	R	7.31-12.4	T FE900DPA	Ws4IA	680	1082	a	JX	67	9 1/4 x3 5/8 x3 5/8	A
29	HB2003		143	211	40000	▲13150	11.00/24	12.00/24	Wau 140GKB	6-4 1/2 x5 1/2	525	6.4	425	172-2700	7-3 1/4 x15 1/2		Y	Fu 5A62♣	15	Own 155W	CD	R	5.56-9.26	T FE900DPA	Ws4IA	680	1082	a	JX	67	9 1/4 x3 5/8 x3 5/8	A
30	(D) . . HB2003D		153	211	40000	▲14400	11.00/24	12.00/24	Cum HBD600	6-4 1/8 x6	672	17	495	150-1800	7-4 1/2 x13		Y	Fu 4A86††	12	Own 155W	CD	R	7.31-12.4	T FE900DPA	Ws4IA	680	1082	a	JX	67	9 1/4 x3 5/8 x3 5/8	A
31	HB2013		143	211	40000	▲13400	11.00/24	12.00/24	Wau 140GKB	6-4 1/2 x5 1/2	525	6.4	425	172-2700	7-3 1/4 x15 1/2		Y	Fu 5A62♣	15	Own 155W	CD	R	5.56-9.26	T FE900DPA	Ws4IA	680	1082	a	JX	67	9 1/4 x3 5/8 x3 5/8	A
32	(D) . . HB2013D		143	211	40000	▲14650	11.00/24	12.00/24	Cum HBD600	6-4 1/8 x6	672	17	495	150-1800	7-4 1/2 x13		Y	Fu 4A86††	12	Own 155W	CD	R	7.31-12.4	T FE900DPA	Ws4IA	680	1082	a	JX	77	9 1/4 x3 5/8 x3 5/8	A
33	(D) . . HB2503D		153	211	50000	▲15850	12.00/24†	14.00/24▼	Cum HBD600	6-4 1/8 x6	672	17	495	150-1800	7-4 1/2 x13		Y	Fu 4A86††	12	Own 177W	CD	R	7.31-12.4	Tim 27462W	Ws4IA	786	1212	a	JX	77	9 1/4 x3 5/8 x3 5/8	AL
34	**Studebaker** . . . 3R5		112	112	4600	2115	6.00/16S	6.50/16S	Own 1R	6-3x4	170	7.5	138	85-4000	4-2 1/8 x5 1/8		N	Own 673519	3	Own 680233	HY	H	4.09-4.89	Own 678860	WG4IH	170	276	CO	2I	40	7x2 1/4 x 1/4	T
35	. . . . . 3R6		112	112	4800	2355	6.00/16S	6.50/16S	Own 6R	6-3 1/8 x4 3/4	246	7.0	205	102-3200	4-2 1/8 x5		N	Own 679807	3	Own 680233	HY	H	4.09-4.89	Own 678860	WG4IH	170	276	CO	2I	40	7x2 1/4 x 1/4	T
36	. . . . . 3R10		122	122	6100	2400	6.50/16S	7.50/16S	Own 1R	6-3x4	170	7.5	138	85-4000	4-2 1/8 x5 1/8		N	Own 673519	3	Own 682041	SF	H	4.86-5.57	Own 678860	WG4IH	198	314	CO	2I	50	7 1/8 x2 1/8 x 1/8	T
37	. . . . . 3R11		122	122	6300	2640	6.50/16S	7.50/16S	Own 6R	6-3 1/8 x4 3/4	246	7.0	205	102-3200	4-2 1/8 x5		N	Own 679146	3	Own 682041	SF	H	4.11-4.86	Own 678860	WG4IH	198	314	CO	2I	50	7 1/8 x2 1/8 x 1/8	T
38	. . . . . 3R14-21		121	121	7800	3100	7.00/17S	7.50/16	Own 6R	6-3 1/8 x4 3/4	246	7.0	205	102-3200	4-2 1/8 x5		N	Own 680438	4	Own 682683	HY	H	5.14-5.83	Own 677091	WG4IH	231	355	. . .	TX	50 1/4	8x2 1/2 x 1/4	T
39	. . . . . 3R14-31		131	131	9500	3160	7.00/17S	7.50/16	Own 6R	6-3 1/8 x4 3/4	246	7.0	205	102-3200	4-2 1/8 x5		N	Own 680438	4	Own 682683	HY	H	5.14-5.83	Own 677091	WG4IH	231	355	. . .	TX	60 1/4	8 1/8 x12 1/4 x 1/8	T
40	. . . . . 3R15-21		121	121	7600	2860	7.00/17S	7.50/16	Own 2R	6-3x4	170	7.5	138	85-4000	4-2 1/8 x5 1/8		N	Own 682683	4	Own 682683	HY	H	5.14-5.83	Own 677091	WG4IH	231	355	. . .	TX	50 1/4	8x2 1/2 x 1/4	T
41	. . . . . 3R15-31		131	131	9300	2920	7.00/17S	7.50/16	Own 2R	6-3x4	170	7.5	138	85-4000	4-2 1/8 x5 1/8		N	Own 680437	4	Own 682683	HY	H	5.14-5.83	Own 677091	WG4IH	231	355	. . .	TX	60 1/4	8 1/8 x12 1/4 x 1/8	T
42	. . . . . 3R16		131	195	14000	3630	6.50/20D	8.25/20	Own 4R	6-3 1/8 x4 3/4	246	7.0	205	102-3200	4-2 1/8 x5		N	Own 681758	4	Own 680399▲●	SF	H	5.14-6.66	Own 674484	WG4IH	294	442	Ce	TX	60 1/4	8 1/8 x12 1/4 x 1/8	T
43	. . . . . 3R16B		131	195	15000	3735	6.50/20D	8.25/20	Own 4R	6-3 1/8 x4 3/4	246	7.0	205	102-3200	4-2 1/8 x5		N	Own 682927	4	Own 680399▲●	SF	H	5.14-6.66	Own 674484	WG4IH	294	442	Ce	TX	60 1/4	8 1/8 x12 1/4 x 1/8	T
44	. . . . . 3R17		131	195	16000	4230	7.50/20D	9.00/20	Own 4R	6-3 1/8 x4 3/4	246	7.0	205	102-3200	4-2 1/8 x5		N	Own 682927	4	Own 680405●	HY	H	6.20-6.80	Own 674484	WG4IH	367	553	Ce	TX	60 1/4	8 1/8 x12 1/2 x 1/8	TP
45	. . . . . 3R17B		131	195	18000	4260	7.50/20D	9.00/20	Own 4R	6-3 1/8 x4 3/4	246	7.0	205	102-3200	4-2 1/8 x5		N	Own 682927	4	Own 680405●	HY	H	6.20-6.80	Own 674484	WG4IH	367	553	Ce	TX	60 1/4	8 1/8 x12 1/2 x 1/8	TP
46	. . . . . 3R28		131	195	14000	3700	6.50/20D	8.25/20	Own VT	8-3 5/8 x3 1/4	233	7.5	200	125-4000	5-2 1/8 x5		N	Own 681758	4	Own 680399▲■	SF	H	5.83-6.66	Own 674484	WG4IH	294	442	Ce	TX	60 1/4	8 1/8 x12 1/4 x 1/8	T
47	. . . . . 3R28B		131	195	15000	3805	6.50/20D	8.25/20	Own VT	8-3 5/8 x3 1/4	233	7.5	200	125-4000	5-2 1/8 x5		N	Own 682927	4	Own 680399▲■	SF	H	5.83-6.66	Own 674484	WG4IH	294	442	Ce	TX	60 1/4	8 1/8 x12 1/4 x 1/8	T
48	. . . . . 3R38		131	195	16000	4300	7.50/20D	9.00/20	Own VT	8-3 5/8 x3 1/4	233	7.5	200	125-4000	5-2 1/8 x5		N	Own 682927	4	Own 680405■	HY	H	6.20-6.80	Own 674484	WG4IH	367	553	Ce	TX	60 1/4	8 1/8 x12 1/2 x 1/8	TP
49	. . . . . 3R38B		131	195	18000	4330	7.50/20D	9.00/20	Own VT	8-3 5/8 x3 1/4	233	7.5	200	125-4000	5-2 1/8 x5		N	Own 682927	4	Own 680405■	HY	H	6.20-6.80	Own 674484	WG4IH	367	553	Ce	TX	60 1/4	8 1/8 x12 1/2 x 1/8	TP
50	**Ward La Fr.** . . D-1		149	220	25000	▲ 9500	10.00/20	11.00/20	Con T6427	6-4 1/8 x4 1/4	427	5.1	340	152-2600	7-2 5/8 x13 1/2		Y	Ful 5A430	5	Tim Q-100	B	R	**-6.83	Tim FD900	Ws4A	600	928	C	TM	68 1/4	9 7/8 x3 x 1/4	T
51	. . . . . D-1C		149	220	29000	▲ 9500	11.00/20	11.00/22	Con T6427	6-4 1/8 x4 1/4	427	5.1	340	152-2600	7-2 5/8 x13 1/2		Y	Ful 5A430	5	Tim U-200	S2	R	**-7.08	Tim FD900	Ws4A	673	1031	C	TM	68 1/4	9 7/8 x3 x 1/4	T
52	. . . . . D-3		149	220	29000	▲10000	11.00/20	11.00/22	Con R6572	6-4 1/4 x5 1/2	572	5.9	440	189-2600	7-3 1/4 x14 1/2		Y	Ful 5C650	5	Tim R-200	S2	R	**-7.84	Tim FD900	Ws4B	673	1031	C	TM	68 1/4	10x3 1/2 x 1/8	T
53	. . . . . D-3S		149	220	29000	▲10000	11.00/20	11.00/22	Con R6602	6-4 1/2 x5 3/4	602	5.9	463	198-2600	7-3 1/4 x14 1/2		Y	Ful 5C650	5	Tim R-200	S2	R	**-7.84	Tim FD900	Ws4B	673	1031	C	TM	68 1/4	10x3 1/2 x 1/8	T
54	(D) D-5		149	220	35000	▲12500	11.00/20	11.00/22	Cum HB600	6-4 1/2 x6	672	17	500	150-1800	7-4 1/2 x16 3/4		Y	Ful 5C650	5	Tim R-200	S2	R	**-6.42	Tim 27463	Ws4B	681	1041	C	TM	68 1/4	10x3 1/2 x 1/8	T
	White-Freightliner																														
55	(c.o.e.) . . . WF 42		114	120	. . . . .	▲11300	10.00/22	. . . . .	Cum NHB	6-5 1/4 x6	743	13	575	200-2100	7-4 1/2 x16 1/2		Y	Fu 4A86	8	Eat 22501	SFd	H	4.33-6.67	Tim 27061	O4IA	645	1050	a	TD	72	10 3/4 x3 1/4 x 1/4	DL
	Four-Wheel-Drive																														
56	Biederman . . PM62		162	162	40000	15040	10.00/20D	11.00/20	Cum NHB600	6-5 1/4 x6	743	16.535	200-2100	7-4 1/2 x13 3/4		Y	Fu R950C	10	Tim SW3458P	WF	L	** -6.17	Tim FE900	Ws6IA	1082	1569	G	TD	62	10x3x 1/8	B
57	Coleman G-55		150	160	34000	12000	11.00/20	12.00/20	Buda LO-525	6-4 1/2 x5 1/2	525	6.7	400	150-2200	7-3x7 3/4		Y	Fu 5A650	5	OW-289-CM	2		9.66- . . .	OW	TWIA	598	9214	. . .	FD	84	10x3x 3/4	C
58	. . . . . G-55		150	160	34000	12000	11.00/20	12.00/20	Wau 140GZ	6-4 5/8 x5 1/2	554	6.4	451	188-2600	. . . . .		Y	Fu 5A86	4	OW-289-CM	2		** -9.66	OW	TWIA	598	921	. . .	FD	84	10x3x 3/4	C
59	(D) D-55		150	160	34000	13000	11.00/20	12.00/20	Cum HB600	6-4 3/8 x6	672	17	500	150-1800	. . . . .		Y	Fu 5A650	5	OW-289-CM	2		** -9.66	OW	TWIA	598	921	. . .	FD	84	10x3x 3/4	C
60	Corbitt . . G302F24		Opt	. . .	24000	. . . . .	10.00/20	10.00/20	Cont B6427	6-4 1/8 x4 1/4	427	6.5	328	142-3000	7-2 1/4 x13 1/2		Y	Fu 5A43	10	Tim 72300	2F	H	** -8.43	Tim F2090	LT4IHV	446	768	a	TD	Opt	9x2 1/4 x 1/4	TD
61	. . . . . G402F31		Opt	. . .	31000	. . . . .	11.00/20	11.00/24	Cont T6427	6-4 1/8 x4 1/4	427	6.4	342	163-2800	7-2 1/8 x13 1/2		Y	Fu 5A43	10	Tim 1357	2F	H	6.65-8.60	Tim F3110	Tw4IA	644	984	a	TD	Opt	9x2 1/2 x 1/4	TD
62	. . . . . G601F32		Opt	. . .	32000	. . . . .	11.00/20	11.00/24	Cont R6513†	6-4 1/2 x5 3/4	513	6.0	410	180-2800	7-3 1/4 x14 1/2		Y	Fu 5C65	10	Tim 1758	2F	H	** -7.33	Tim F3100	Tw4IA	644	984	a	TD	Opt	10 x3 1/4 x 1/4	TF
63	(D) . . . D404F31		Opt	. . .	31000	. . . . .	11.00/20	11.00/24	Cum JBS600	6-4 1/4 x5	401	15.360	150-2500	7-3 1/8 x7.8		Y	Fu 5A62	10	Tim 1357	2F	H	6.65-8.60	Tim F3110	Tw4IA	644	984	a	TD	Opt	10 x3 1/4 x 1/4	TF
64	(D) . . . D803F32		Opt	. . .	32000	. . . . .	11.00/20	11.00/24	Cum NHB600‡‡	6-5 1/4 x6	743	16.535	200-2100	7-4 1/2 x16 1/2		Y	Fu 5C720	10	Tim 1758	2F	H	** -7.33	Tim F3100	Tw4IA	644	984	a	TD	Opt	10 x3 1/4 x 1/4	TF
65	(T)(D) D803U32		Opt	. . .	32000	. . . . .	11.00/20	11.00/24	Cum NHB600‡‡	6-5 1/4 x6	743	16.535	200-2100	7-4 1/2 x16 1/2		Y	Fu 5C720	10	Tim 1758	2F	H	** -7.33	Tim F3100	Tw4IA	644	984	a	TD	Opt	10 x3 1/4 x 1/4	TF
66	Dodge . . . C-1-PW6	1955	126	126	8700	3950	7.50/16S	9.00/16S	Own T-137	6-3 1/4 x4 3/8	230	7.3	191	103-3600	4-2 3/8 x4.8		Y	NP-89060	4	Own T-137	HyF	H	4.89-5.83	Own T-137	O4IH	210	310	CO	PX	52 3/4	8 1/2 x2 x6	C

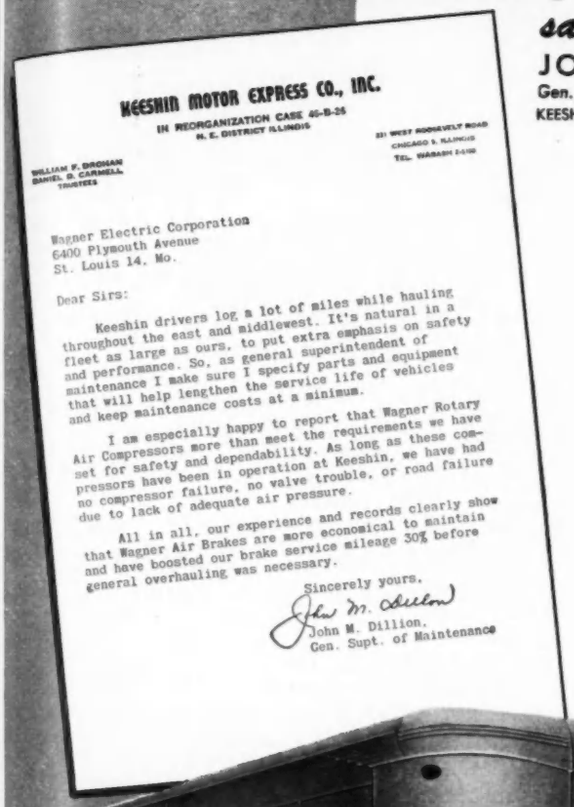
(Turn to Page 159, Please)

For Key to References and Abbreviations see Page 151



"Wagner Air Brakes ...boosted our brake service mileage 30% before general overhauling was necessary."

says:
JOHN M. DILLION
Gen. Supt. of Maintenance
KEESHIN MOTOR EXPRESS CO., INC.



KEESHIN MOTOR EXPRESS CO., INC.
IN REORGANIZATION CASE 40-B-26
N. E. DISTRICT ILLINOIS

WILLIAM F. BROGAN
DANIEL D. CARMELA
TRUSTEES

221 WEST ROOSEVELT ROAD
CHICAGO 5, ILLINOIS
TEL. WABASH 2-5100

Wagner Electric Corporation
6400 Plymouth Avenue
St. Louis 14, Mo.

Dear Sirs:

Keeshin drivers log a lot of miles while hauling throughout the east and middlewest. It's natural in a fleet as large as ours, to put extra emphasis on safety and performance. So, as general superintendent of maintenance I make sure I specify parts and equipment that will help lengthen the service life of vehicles and keep maintenance costs at a minimum.

I am especially happy to report that Wagner Rotary Air Compressors more than meet the requirements we have set for safety and dependability. As long as these compressors have been in operation at Keeshin, we have had no compressor failure, no valve trouble, or road failure due to lack of adequate air pressure.

All in all, our experience and records clearly show that Wagner Air Brakes are more economical to maintain and have boosted our brake service mileage 30% before general overhauling was necessary.

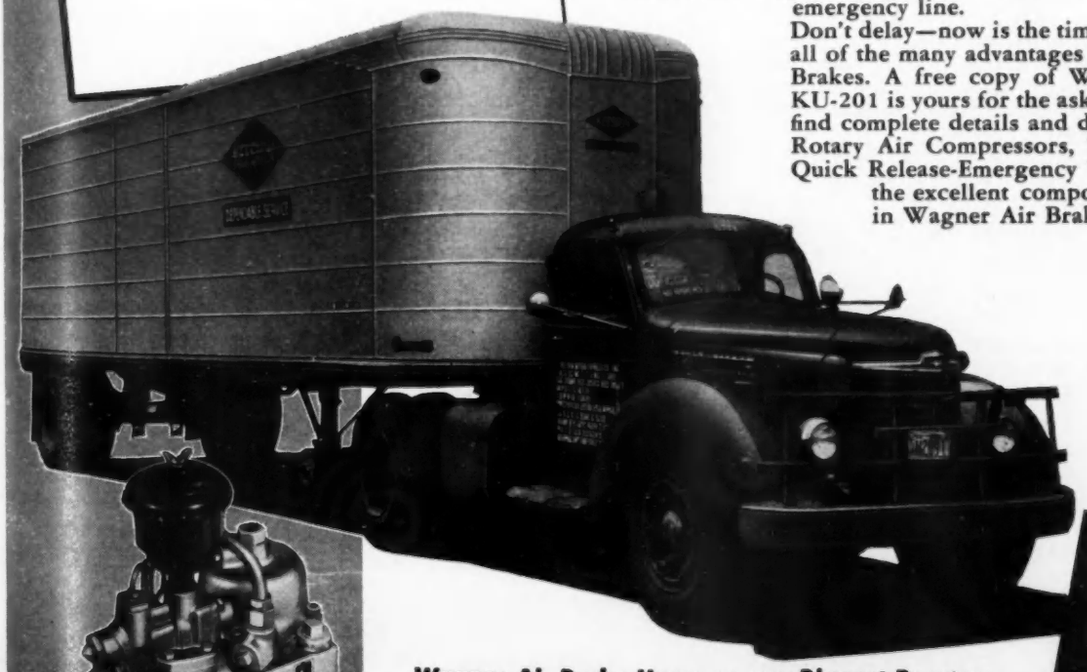
Sincerely yours,
John M. Dillion
John M. Dillion,
Gen. Supt. of Maintenance

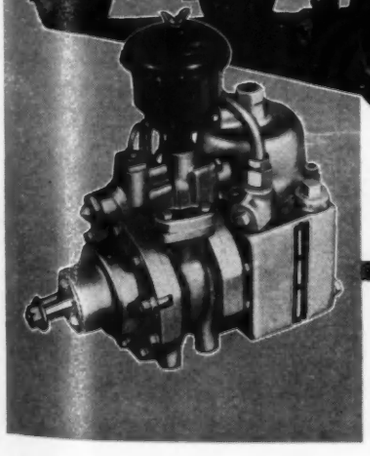
The record of Wagner Air Brakes speaks for itself. Men, like John Dillion of Keeshin Motor Express Co., Inc., know they can trust their safe, reliable performance. Their own maintenance records prove beyond any doubt that the Wagner Rotary Air Compressor, standard on all Wagner Air Brake Systems, lasts longer, operates better, requires less repair and assures an ample supply of air pressure while in operation to meet any road stopping emergency. Every Wagner Rotary Air Compressor has these unexcelled, superior features:

- **Rotary motion to reduce friction loss**
- **Maintains uniform torque load**
- **Assures fast air recovery**
- **Compact installation**
- **Reduces carbon and sludge formation**
- **Easy, infrequent preventive maintenance**

Another dependable member of the family of Wagner Air is the Wagner Relay-Quick Release-Emergency Valve for greater trailer breakaway protection. This emergency unit automatically applies trailer brakes if there is an abnormal drop in the pressure maintained in the trailer emergency line.

Don't delay—now is the time to investigate all of the many advantages of Wagner Air Brakes. A free copy of Wagner Bulletin KU-201 is yours for the asking. In it you'll find complete details and data on Wagner Rotary Air Compressors, Wagner Relay-Quick Release-Emergency Valves, and all the excellent components available in Wagner Air Brake Systems.





Wagner Air Brake Users are our Biggest Boosters.

Wagner Electric Corporation
6470 PLYMOUTH AVE., ST. LOUIS 14, MO., U. S. A.
(Branches in Principal Cities and in Canada)
LOCKHEED HYDRAULIC BRAKE PARTS and FLUID . . . NoRoL . . . CoMaX BRAKE LINING . . . AIR BRAKES . . . TACHOGRAPHS . . . ELECTRIC MOTORS . . . TRANSFORMERS . . . INDUSTRIAL BRAKES

K54-9

(Continued from Page 158)

Line Number	MAKE AND MODEL	Chassis List Price	Wheelbase Minimum Standard	Wheelbase Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	Tire Sizes (D-dual rear, S-single rear) Standard Front and Rear	Tire Sizes Maximum Authorized Tire Size (Duals unless noted)	Engine Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number Diameter and Length	Governor Standard
1	Federal 4501	.....	143	203	31000	8470	10.00/20D	11.00/20	Con T6427F*	6-4 7/16x4⅞	427	6.4	350	166-3000	7-2⅞x13½	Y
2	 4502	.....	143	203	31000	8700	10.00/20D	11.00/20	Con T6427F*	6-4 7/16x4⅞	427	6.4	350	166-3000	7-2⅞x13½	Y
3	 5501	.....	143	203	38000	9150	11.00/20D	12.00/20	Con T6427F*	6-4 7/16x4⅞	427	6.4	350	166-3000	7-2⅞x13½	Y
4	 5502	.....	143	203	38000	9390	11.00/20D	12.00/20	Con T6427F*	6-4 7/16x4⅞	427	6.4	350	166-3000	7-2⅞x13½	Y
5	 6001	.....	143	203	39000	9815	11.00/22D	12.00/20	Con U6501F*	6-4½x5¼	501	...	...	182-2600		
6	 6002	.....	143	203	39000	9962	11.00/22D	12.00/20	Con U6501F*	6-4½x5¼	501	6.4	414	182-2600	7-2¾x14⅛	Y
7	 6501	.....	141	201	40000	10505	11.00/22D	12.00/20	Con R6602F*	6-4⅞x5⅜	602	6.4	480	212-2800	7-3¼x14½	Y
8	 6502	.....	141	201	40000	10655	11.00/22D	12.00/20	Con R6602F*	6-4⅞x5⅜	602	6.4	480	212-2800	7-3¼x14½	Y
9	FWD 141	.....	136	Opt	14500	▲5500	7.50/20D	10.00/208	Her QXLD-3	6-3 7/16x4¼	236	6.5	190	97-3200	7-2½x10 1/16	Y
10	 170	.....	144	...	17500	▲7500	8.25/20D	10.00/208	Wau 195GKA	6-4⅛x4	320	...	243	125-3200		Y
11	 220	.....	144	Opt	22000	▲8000	9.00/20D	10.00/20	Wau 195GKA	6-4⅛x4¼	320	6.2	243	125-3200	4-2⅝x7⅛	Y
12	(D) 223D	.....	144	Opt	22000	▲8785	9.00/20D	10.00/20	GMC 3-71	3-4¼x5	213	16.	300	113-2000	4-3½x4½	Y
13	 262	.....	144	Opt	26000	▲9000	10.00/20D	10.00/20	Wau 135GKB	6-4¼x5	426	6.3	337	148-2800	7-3¼x14	Y
14	(D) 264D	.....	144	Opt	26000	▲8935	10.00/20D	10.00/20	GMC 4-71	4-4¼x5	284	16.	400	150-2100	5-3½x5⅝	Y
15	.... M262	.....	154	Opt	26000	▲9000	10.00/20D	10.00/20	Wau 135GKB	6-4¼x5	426	6.3	337	148-2800	7-3¼x14	Y
16	(D) M264D	.....	154	Opt	26000	▲8935	10.00/20D	10.00/20	GMC 4-71	4-4¼x5	284	16	400	150-2100	5-3½x5⅝	Y
17	.... T273	.....	139	Opt	27000	▲9500	10.00/20D	10.00/20	Wau 135GZB	6-4⅜x5	451	6.3	354	153-2800	7-3¼x14	Y
18	.... T285	.....	139	Opt	28000	▲10000	10.00/20D	10.00/20	Wau 140GKB	6-4½x5½	525	6.4	425	172-2600	7-3¼x13 11/16	Y
19	.... T286	.....	139	Opt	28000	▲10000	10.00/20D	10.00/20	Wau 140GZB	6-4⅝x5½	554	6.4	448	188-2600	7-3¼x13 11/16	Y
20	(D) T284D	.....	139	Opt	28000	▲10225	10.00/20D	10.00/20	GMC 4-71	4-4¼x5	284	16.	400	150-2100	5-3½x5⅝	Y
21	(D) T288D	.....	139	Opt	28000	▲10900	10.00/20D	10.00/20	CumHRBB-600	6-5⅛x6	743	16	505	180-2000	7-4½x....	Y
22	 323	.....	150	Opt	32000	▲12000	11.00/20D	13.00/208	Wau 135GZB	6-4⅜x5	451	6.3	354	153-2800	7-3¼x14	Y
23	 324	.....	150	Opt	32000	▲12125	11.00/20D	13.00/208	Wau 140GK	6-4½x5½	525	6.4	420	160-2400	7-3¼x13 11/16	Y
24	(D) 324D	.....	150	Opt	32000	▲12350	11.00/20D	13.00/208	GMC 4-71	4-4¼x5	284	16	400	150-2100	5-3½x5⅝	Y
25	(D) 327D	.....	150	Opt	32000	▲12700	11.00/20D	13.00/208	Cum HRB-600	6-5⅛x6	743	16.	540	165-1800	7-4½....	Y
26	 365	.....	150	Opt	36000	▲12600	11.00/20D	13.00/208	Wau 140GKB	6-4½x5½	525	6.4	425	172-2600	7-3¼x13 11/16	Y
27	 366	.....	150	Opt	36000	▲12600	11.00/20D	13.00/208	Wau 140GZB	6-4⅝x5½	554	6.4	448	188-2600	7-3¼x13 11/16	Y
28	(D) 368D	.....	150	Opt	36000	▲13500	11.00/20D	13.00/208	CumHRBB-600	6-5⅛x6	743	16	505	180-2000	7-4½x....	Y
29	.... A369*	.....	150	Opt	36000	▲12600	12.00/20S	13.00/208	Wau 145GKB	6-5¼x6	779	6.2	595	240-2400	7-3½x17¾	Y
30	 408	.....	150	Opt	40000	▲14000	12.00/20D	14.00/208	Wau 145GK	6-5¼x6	779	6.2	595	216-2000	7-3½x17¾	Y
31	 409	.....	150	Opt	40000	▲14000	12.00/20D	14.00/208	Wau 145GKB	6-5¼x6	779	6.2	595	240-2400	7-3½x17¾	Y
32	(D) 406D	.....	150	Opt	40000	▲14400	12.00/20D	14.00/208	GMC 6-71	6-4¼x5	426	16.	600	200-2000	7-3½x7⅞	Y
33	(D) 409D	.....	150	Opt	40000	▲14600	12.00/20D	14.00/208	Cum NHB-600	6-5⅛x6	743	16	535	200-2100	7-4½x....	Y
34	 509	.....	150	Opt	50000	▲16000	12.00/24D	14.00/208	Wau 145GKB	6-5¼x6	779	6.2	595	240-2400	7-3½x17¾	Y
35	(D) 506D	.....	150	Opt	50000	▲16400	12.00/24D	14.00/208	GMC 6-71	6-4¼x5	426	16.	600	200-2000	7-3½x7⅞	Y
36	(D) 509D	.....	150	Opt	50000	▲16600	12.00/24D	14.00/208	Cum NHB-600	6-5⅛x6	743	16.	535	200-2100	7-4½x....	Y
	Marmon-Herr.															
37	.... M104	.....	110	...	5300	3650	6.50/16S	6.50/16	Ford	8-3½x3.1	239	7.2	214	130-4200	5-2½x3 11/16	N
38	.... 6M104	.....	110	...	5300	3650	6.50/16S	6.50/16	Ford	6-3.62x3.6	223	7.2	193	115-3900	4-2.5x3 11/16	N
39	.... M254	.....	118	...	8000	4200	7.50/17S	7.50/17	Ford	8-3½x3.1	239	7.2	214	130-4200	5-2½x3 11/16	N
40	.... 6M254	.....	118	...	8000	4200	7.50/17S	7.50/17	Ford	6-3.62x3.6	223	7.2	193	115-3900	4-2.5x3 11/16	N
41	.... M354	.....	130	...	10200	4300	7.50/17S	7.50/17	Ford	8-3½x3.1	239	7.2	214	130-4200	5-2½x3 11/16	N
42	.... 6M354	.....	130	...	10200	4300	7.50/17S	7.50/17	Ford	6-3.62x3.6	223	7.2	193	115-3900	4-2.5x3 11/16	N
43	.... 6PM354	.....	104	122	9500	4000	7.50/17S	7.50/17	Ford	6-3.62x3.6	223	7.2	193	115-3900	4-2.5x3 11/16	N
44	.... M504	.....	130	154	15500	5300	7.50/20D	8.25/20	Ford	8-3½x3.1	239	7.2	214	130-4200	5-2½x3 11/16	N
45	.... 6M504	.....	130	154	15500	5700	7.50/20D	8.25/20	Ford	6-3.62x3.6	223	7.2	193	115-3900	4-2.5x3 11/16	N
46	.... CM504	.....	110	158	15500	5900	7.50/20D	8.25/20	Ford	8-3.1x3¾	239	6.8	194	106-3500	3-2.5x4.9	N
47	.... 6PM504	.....	130	...	15500	5100	7.50/20S	8.25/20	Ford	6-3.62x3.6	223	7.2	193	115-3900	4-2.5x3 11/16	N
48	.... BM504	.....	154	...	15500	5157	7.50/20D	8.25/20	Ford	8-3½x3.1	239	7.2	214	136-4200	5-2½x3 11/16	N
49	.... 6BM504	.....	154	...	15500	5295	7.50/20D	8.25/20	Ford	6-3.56x3.6	215	7.0	185	101-3500	4-2.5x4.5	N
50	.... M604	.....	130	172	17000	5300	7.50/20D	8.25/20	Ford	8-3.62x3.1	256	7.2	226	138-3900	5-2½x3 11/16	N
51	.... B6M604	.....	130	172	17000	5800	7.50/20D	8.25/20	Ford	6-3.5x4.4	254	6.8	217	112-3500	4-2.8x4.8	Y
52	.... BM604	.....	192	...	17000	5561	7.50/20D	8.25/20	Ford	8-3.62x3.1	256	7.2	226	138-3900	5-2½x3 11/16	N
53	.... B6BM604	.....	192	...	17000	5705	7.50/20D	8.25/20	Ford	6-3.5x4.4	254	6.8	217	112-3500	4-2.8x4.8	Y
54	.... CM604	.....	110	158	17000	5850	7.50/20D	8.25/20	Ford	8-3.62x3.1	256	7.2	226	138-3900	5-2½x3 11/16	N
55	.... B6M704	.....	132	192	21500	7150	8.25/20D	10.00/20	Ford	6-3.5x4.4	254	6.8	217	112-3500	4-2.8x4.8	Y
56	.... B6BM704	.....	233	...	21500	7450	8.25/20D	9.00/20	Ford	6-3.5x4.4	254	6.8	217	112-3500	4-2.8x4.8	Y
57	.... M754	.....	132	192	21500	7550	8.25/20D	10.00/20	Ford	8-3.56x3.5	279	7.2	246	152-3800	5-2⅝x4 5/64	Y
58	.... CM754	.....	116	156	21500	7600	8.25/20D	10.00/20	Ford	8-3.56x3.5	279	7.2	246	152-3800	5-2⅝x4 5/64	Y
59	.... BM754	.....	233	...	21500	7150	9.00/20D	10.00/20	Ford	8-3.56x3.5	279	7.2	246	152-3800	5-2⅝x4 5/64	Y
60	.... M804	.....	132	192	24000	7910	10.00/20D	10.00/20	Ford	8-3.8x3.5	317	7.2	286	170-3900	5-2⅝x4 5/64	Y
61	.... CM804	.....	116	156	24000	7900	10.00/20D	10.00/20	Ford	8-3.8x3.5	317	7.2	286	170-3900	5-2⅝x4 5/64	Y
62	.... M904	.....	132	192	28000	8210	10.00/20D	11.00/20	Ford	8-3.8x3.5	317	7.2	286	170-3900	5-2⅝x4 5/64	Y
63	.... MH-610	.....	159	193	24000	9547	10.00/20D	11.00/20	Her WXLC3	6-4¼x4¾	404	6.5	312	139-2600	7-2⅝x13¼	Y
64	.... MH-615	.....	159	193	26000	▲10158	10.00/20D	11.00/20	Her WXLC3	6-4¼x4¾	404	6.5	312	139-2600	7-2⅝x13½	Y
65	.... MH-620	.....	159	193	28000	▲10615	10.00/20D	11.00/20	Her RXLC	6-4⅝x5¼	529	6.0	408	146-2400	6-3½x13¼	Y
66	.... MH625	.....	159	193	30000	▲11511	11.00/20D	12.00/20	Her RXLC	6-4⅝x5¼	529	6.0	408	146-2400	7-3½x13¼	Y
67	.... MH630	.....	159	193	33000	▲11711	11.00/20D	12.00/20	Her RXLDH	6-4¾x5¼	558	6.0	440	180-2600	7-3½x13¼	Y
68	NAPCOPower-Pak															
69	(C) 4153	.....	137	...	15700	4945	6.50/20D	7.50/20D	C-Load-Mas	6-3 7/16x3 11/16	236	7.5	200	112-3700	4- ♦♦	N
70	(C) 4453	.....	161	...	15700	5095	6.50/20D	7.50/20D	C-Load-Mas	6-3 7/16x3 11/16	236	7.5	200	112-3700	4- ♦♦	N
71	(C) 6153	.....	137	...	17700	5190	7.50/20D	8.25/20D	C-Job-Mas	6-3¾x3 11/16	261	7.2	220	135-4000	4- ♦♦	N
72	(C) 6453	.....	161	...	17700	5315	7.50/20D	8.25/20D	C-Job-Mas	6-3¾x3 11/16	261	7.2	220	135-4000	4- ♦♦	N
73	(C) 6553	.....	179	...	17700	5425	7.50/20D	8.25/20D	C-Job-Mas	6-3¾x3 11/16	261	7.2	220	135-4000	4- ♦♦	N
74	(C) 5453	.....	134	...	17700	5225	7.50/20D	8.25/20D	C-Job-Mas	6-3¾x3 11/16	261	7.2	220	135-4000	4- ♦♦	N
75	(C) 5753	.....	158	...	17700	5350	7.50/20D	8.25/20D	C-Job-Mas	6-3¾x3 11/16	261	7.2	220	135-4000	4- ♦♦	N
76	Oshkosh W-212	.....	144	205	22000▲	8430	9.00/20D	9.00/20	Her JXLD	6-4x4¼	339	...	272	130-3000	7-2¼x10 11/16	Y
77	.... W-214	.....	144	205	22000▲	9025	9.00/20D	9.00/20	Con B6427	6-4 7/16x4⅞	427	...	328	137-2600	7-2⅞x10½	Y
78	.... W-314	.....	150	205	25000▲	9650	10.00/20D	10.00/20	Con B6427	6-4 7/16x4⅞	427	...	328	137-2600	7-2⅞x13½	Y

Line Number	Transmission Make and Model	Forward Speeds	Rear Axle Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	Front Axle Make and Model	Brakes Service Make Location Type Operation	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	Frame Side Rail Dimensions	Frame Type
1	Cla 290V‡‡	5	Tim Q100P	SF	R	** -6.83	Tim FD-900	Tw4IA	606	933	a	TD	60½	10¼x3¼x7/16	T
2	Cla 290V‡‡	5	Tim Q300P	dF	R	6.42-8.38	Tim FD-900	Tw4IA	606	933	a	TD	60½	10¼x3¼x7/16	T
3	Cla 290V‡‡	5	Tim U300P	HF	R	6.42-8.38	Tim FD-900	Tw4IA	722	1051	a	TD	60½	10¼x3¼x7/16	T
4	Cla 290V‡‡	5	Tim U300P	HF	R	6.42-8.38	Tim FD-900	Tw4IA	722	1051	a	TD	60½	10¼x3¼x7/16	T
5				SF				Tw4IA							
6	Fu 5A65§	5	Tim U200P‡	HF	R	6.53-8.53	Tim FD-900	Tw4IA	722	1051	a	TX	60½	10¼x3¼x7/16	T
7	Fu 5A65§	5	Tim U300P‡	HF	R	6.53-8.53	Tim FE-900	Ws4IA	722	1051	a	TX	60½	10¼x3¼x7/16	T
8	Fu 5A65§	5	Tim U300P‡	HF	R	6.53-8.53	Tim FE-900	Ws4IA	722	1051	a	TX	60½	10¼x3¼x7/16	T
9	WG T9A	8	Tim 53547	SF	H	** -6.67	Tim F30	T4IHV	324	518	a	T4	72	8x3x¼	T
10	Fu 5A43	5	Own 23	SF	..	** -5.72	Own 22	4IHV	...	583	...	T4	...	9x3x¼	T
11	Own 25	5	Own 23	SF	H	** -5.28	Own 22	Wg4IHV	419	706	a	T4	79½	9x3x¼	T
12	Own 250	5	Own 23	SF	H	** -5.28	Own 22	Wg4IHV	419	706	a	T4	79½	9x3x¼	T
13	Own 25	5	Own 23	SF	H	** -5.28	Own 22	Wg4IHV	419	706	a	T4	79½	9x3x¼	T
14	Own 250	5	Own 23	SF	H	** -5.28	Own 22	Wg4IHV	419	706	a	T4	79½	9x3x¼	T
15	Own 25	5	Own 23	SF	H	** -5.28	Own 22	Wg4IHV	419	706	a	T4	89¾	9x3x¼	T
16	Own 250	5	Own 23	SF	H	** -5.28	Own 22	Wg4IHV	419	706	a	T4	89¾	9x3x¼	T
17	Fu R45C	8	Own 23	SF	H	** -5.28	Own 22	Wg4IHV	419	706	a	T4	74½	9x3x¼	T
18	Fu R95C	10	Own 23	SF	H	** -5.28	Own 22	Wg4IHA	419	706	a	T4	74½	9x3x¼	T
19	Fu R95C	10	Own 23	SF	H	** -5.28	Own 22	Wg4IHA	419	706	a	T4	74½	9x3x¼	T
20	Fu R950C	10	Own 23	SF	H	** -5.28	Own 22	Wg4IHA	419	706	a	T4	74½	9x3x¼	T
21	Fu R950C	10	Own 23	SF	H	** -5.28	Own 22	Wg4IHA	419	706	a	T4	74½	9x3x¼	T
22	Own 35	5	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x11/32	C
23	Own 35	5	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x11/32	C
24	Own 35	5	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x11/32	C
25	Own 35	5	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x11/32	C
26	Own 35	5	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x11/32	C
27	Own 35	5	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x11/32	C
28	Own 35	5	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x11/32	C
29	Own 35	10	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x11/32	C
30	Own 55	10	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x11/32	C
31	Own 55	10	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x11/32	C
32	Own 55	10	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x11/32	C
33	Own 55	10	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x11/32	C
34	Own 55	10	Tim 79721	SF	H	** -7.69	Tim F7901W	Wg4IA	693	1144	a	T4	90	10x3x11/32	C
35	Own 55	10	Tim 79721	SF	H	** -7.69	Tim F7901W	Wg4IA	693	1144	a	T4	90	10x3x11/32	C
36	Own 55	10	Tim 79721	SF	H	** -7.69	Tim F7901W	Wg4IA	693	1144	a	T4	90	10x3x11/32	C
37	Ford	4	Ford	Hy	H	** -4.27	Own	F4H	178	259	a	X	40.5	5.9x2.2x.15	C
38	Ford	4	Ford	Hy	H	** -4.27	Own	F4H	178	259	a	X	40.5	5.9x2.2x.15	C
39	Ford	8	Ford	Hy	H	** -4.86	Own	F4H	181	282	a	PX	48.5	6.0x2.2x.19	C
40	Ford	8	Ford	Hy	H	** -4.86	Own	F4H	181	282	a	PX	48.5	6.0x2.2x.19	C
41	Ford	8	Ford	Hy	H	** -5.83	Own	F4H	223	355	a	PX	60.5	7.0x2.7x.21	C
42	Ford	8	Ford	Hy	H	** -5.83	Own	F4H	223	355	a	PX	60.5	7.0x2.7x.21	C
43	Ford	8	Ford	Hy	H	** -5.83	Own	F4H	181	282	a	PX	82.9	6.0x2.2x.19	C
44	Ford	8	Ford	Hy	H	** -6.8	Own	F4H	340	486	a	PX	60.5	8.8x2.8x.25	C
45	Ford	8	Ford	Hy	H	** -6.8	Own	F4H	340	486	a	PX	60.5	8.8x2.8x.25	C
46	Ford	8	Ford	Hy	H	** -6.8	Own	F4H	340	486	a	PX	60.0	8.8x2.8x.25	C
47	Ford	8	Ford	Hy	H	** -6.8	Own	F4H	340	486	a	PX	108.9	8.8x2.8x.25	C
48	Ford	8	Ford	Hy	H	** -6.8	Own	F4H	340	486	a	PX	128.0	8.8x2.8x.25	C
49	Ford	8	Ford	Hy	H	** -6.8	Own	F4H	340	486	a	PX	128.0	8.8x2.8x.25	C
50	Ford	8	Ford	Hy	H	** -6.8	Own	F4HV	371	553	a	PX	60.5	8.8x2.7x.25	C
51	Ford	8	Ford	Hy	H	** -6.8	Own	F4HV	371	553	a	PX	60.5	8.8x2.7x.25	C
52	Ford	8	Ford	Hy	H	** -6.8	Own	F4HV	371	553	a	PX	166.0	8.9x2.9x.28	C
53	Ford	8	Ford	Hy	H	** -6.8	Own	F4HV	371	553	a	PX	166.0	8.9x2.9x.28	C
54	Ford	8	Ford	Hy	H	** -6.8	Own	F4HV	371	553	a	PX	60.0	8.8x2.8x.25	C
55	Ford	8	Ford	Hy	H	** -7.2	Own	F4HV	444	697	a	PX	60.5	9x3x.25	L
56	Ford	8	Ford	Hy	H	** -7.2	Own	F4HV	444	697	a	PX	205.0	9x3x.25	L
57	Ford	10	Ford	Hy	H	** -7.2	Own	F4HV	444	697	a	PX	60.5	9x3x.25	L
58	Ford	10	Ford	Hy	H	** -7.2	Own	F4HV	414	697	a	PX	66.0	9x3x.25	L
59	Ford	10	Ford	Hy	H	** -7.2	Own	F4HV	444	697	a	PX	205.0	9x3x.25	L
60	Ford	10	Ford	SB	H	** -7.17	Own	F4HV	485	729	a	PX	60.5	9x3x.25	L
61	Ford	10	Ford	SB	H	** -7.17	Own	F4HV	485	729	a	PX	66.0	9x3x.25	L
62	Ford	10	Ford	SB	H	** -7.17	Own	F4HV	541	829	a	PX	60.5	9x3x.25	L
63	MH610	10	MH610A	HyF	H	** -6.80	MH610	4HV	361	583	c	F	84	12¼x3x7/16	CTf
64	MH615	10	MH615A	2S	H	** -8.43	MH615	BW4A	459	766½	c	F	84	12¼x3x7/16	CTf
65	MH620	10	MH620A	2S	H	** -8.43	MH620	BW4A	459	766½	c	F	84	12¼x3x7/16	CTf
66	MH625	10	MH625	2S	H	** -8.59	MH625	4HV	650	1056	c	F	84	12¼x3x7/16	CTf
67	MH630	10	MH630	2SF	H	** -8.59	MH630	BW4A	650	1056	c	F	84	12¼x3x7/16	CTf
68															
69	Chev.	8	Chev.	HyF	H	** -6.17	Own	C2IHV	350	579	ac	TIX	60	8⅞x2⅞x¼	C
70	Chev.	8	Chev.	HyF	H	** -6.17	Own	C2IHV	350	579	ac	TIX	84	8⅞x2⅞x¼	C
71	Chev.	8	Chev.	HyF	H	** -6.17	Own	C2IHV	350	579	ac	TIX	60	8⅞x2⅞x¼	C
72	Chev.	8	Chev.	HyF	H	** -6.17	Own	C2IHV	350	579	ac	TIX	84	8⅞x2⅞x¼	C
73	Chev.	8	Chev.	HyF	H	** -6.17	Own	C2IHV	350	579	ac	TIX	102	8⅞x2⅞x¼	C
74	Chev.	8	Chev.	HyF	H	** -6.17	Own	C2IHV	350	579	ac	TIX	84½	8⅞x2⅞x¼	C
75	Chev.	8	Chev.	HyF	H	** -6.17	Own	C2IHV	350	579	ac	TIX	108½	8⅞x2⅞x¼	C
76	Own W-212	5	Own W212	HF	H	** -7.5	Own W212	T4IHDV	401	665	Co	TX	82	8x3x¼	Tf
77	Own W-214	5	Own W-214	HF	H	** -6.2	Own W-214	T4IHDV	401	665	Co	TX	82	8¼x3x⅜	TF
78	Own W-314	5	Own W314	HF	H	** -6.2	Own W314	T4IHDV	470	825	Co	TX	82	8¼x3x⅜	TF

(Turn to Page 162, Please)

For Key to References and Abbreviations See Page 151

"WORLD'S LARGEST TRUCK"

VICKERS® HYDRAULICS

Dart Model 60 Truck is shown carrying full 75-ton payload.

This Dart behemoth with a gross vehicle weight of 240,000 lb is said to be the largest truck in the world. It has two engines totaling 700 horsepower. Everything about it is on a colossal scale.

A new hydraulic circuit was developed by Vickers expressly for Model 60. The driver steers this truck with no more effort than he would a passenger car as the steering gear merely actuates the valve that controls the flow of oil to the steering cylinders. Twin cylinders provide 50,000 lb steering force (at 1000 psi oil pressure) for the dual front wheels.

Dart is thoroughly familiar with the many advantages of Vickers Hydraulic Power Steering having used it since 1938.

Vickers hydraulic equipment is available for all types and sizes of mobile equipment. Ask for new Catalog M-5101.

Vickers hydraulic power dumps the load; twin hoists are rated at 130,000 lb push at 1000 psi oil pressure.

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REPRESENTATIVE STANDARD VICKERS® UNITS USED ON DART MODEL 60

6526

Balanced Vane Pump | Balanced Piston Relief Valve | Multiple Unit Valve | Check Valve | Immersion Suction Filter

ENGINEERS AND BUILDERS OF OIL HYDRAULIC EQUIPMENT SINCE 1921

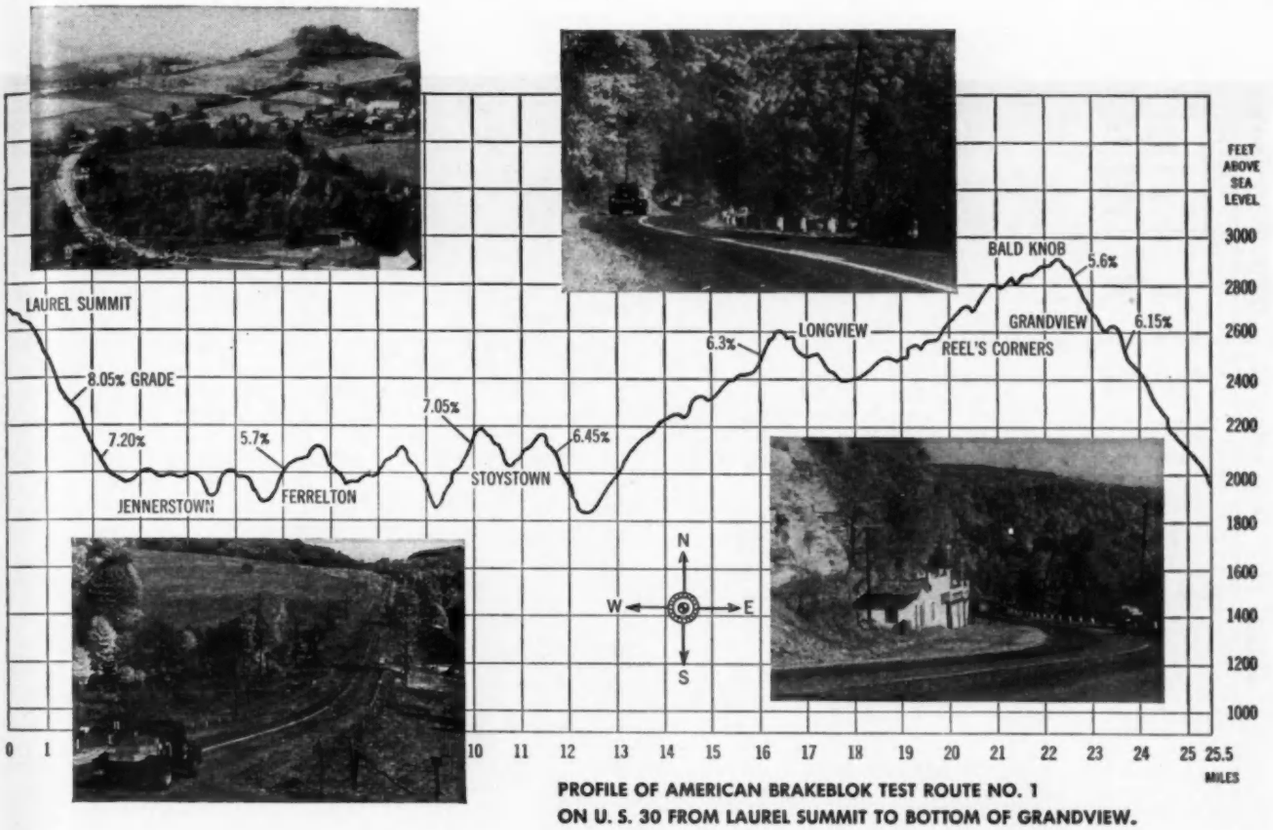
(Continued from Page 160)

Line Number	Make and Model	Chassis List Price	Wheelbase: Minimum Standard	Wheelbase: Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	Tire Sizes (D-dual rear, S-single rear): Standard Front and Rear	Tire Sizes: Maximum Authorized Tire Size (Duals unless noted)	Engine Details: Make and Model	Engine: No. of Cylinders, Bore and Stroke	Engine: Displacement	Engine: Comp. Ratio	Engine: Torque lb. ft.	Engine: Max. Brake H.P. at R.P.M. Given	Engine: Main Bearings Number, Diameter and Length	Governor Standard	Transmission: Make and Model	Transmission: Forward Speeds	Rear Axle: Make and Model	Rear Axle: Gear and Type	Rear Axle: Drive & Torque	Rear Axle: Gear Ratio Range in High	Front Axle: Make and Model	Brakes, Service: Make, Location, Type, Operation	Brakes, Service: Lining Area	Brakes, Service: Drum Area	Brakes, Service: Drum Material	Brakes: Hand Location Type	C-A Dimensions (Min. Std. W. B.)	Frame: Side Rail Dimensions	Frame: Type
	Oshkosh—Cont'd																														
1	..........W-414	......	150	205	28000	▲10150	10.00/20D	10.00/20	Con T6427	6-4 7/16x4⅞	427	...	342	157-2600	7-2⅞x13½	Y	Own W-414	5	Own W414	HF	H	** -6.2	Own W414	T4IHDV	510	876	...	PX	82	8¼x3x⅜	TF
2	..........W1700	......	150	205	30000	▲11200	11.00/20D	12.00/20S	Her RXC	6-4⅝x5¼	529	...	410	145-2200	7-3x13¼	Y	Own W-1700	5	Own W1700	SF	H	** -6.4	Own 1700	T4IHDV	570	980	G	PX	82	8¼x3x⅜	TF
3	..........W-712	......	150	205	34000	▲12500	11.00/20D	12.00/20	Her RXLDH	6-4¾x5¼	558	...	462	190-2600	7-3⅛x13¼	Y	Own W-712	5	Own W712	2F	H	** -6.8	Own W712	L4IHV	630	975	G	PX	82	10⅛x3x⅜	TF
4	(D).....WA-906	......	160	205	40000	▲16000	13.00/20D	14.00/20S	CumHRBB-600	6-5⅛x6	743	...	505	180-2000	7-4½x16	Y	Own WA-906	12	Own WA906	2F	H	** -6.15	Own WA906	LT4IA	645	1190	G	PX	90	10⅛x3½x⅜	TF
5	..........W2211	......	160	205	42000	▲16500	13.00/20D	14.00/20S	Wau 145GKB	6-5¼x6	779	...	590	240-2400	7-3½x17¾	Y	Own W-2211	12	Own W2211	2F	H	** -6.15	Own W2211	LT4IA	645	1190	G	PX	90	10⅛x3½x⅜	TF
6	..........W2206	......	160	205	54000	▲19000	13.00/24D	14.00/24	HS 400	6-5¾x7	●	...	930	295-2000	7-3¼x14 3/16	Y	Own W-2206	10	Own W2206	2F	H	** -6.3	Own W2206	LT4IA	780	1190	G	PX	90	10⅛x3½x⅜	LF
7	(D)....WA2208	......	160	205	42000	▲16900	13.00/20D	14.00/20S	Cum NHB-600	6-5⅛x6	743	...	535	200-2100	7-4½x16½	Y	Own WA-2208	12	Own WA2208	2F	H	** -6.15	Own WA2208	LT4IA	645	1190	G	PX	90	10⅛x3½x⅜	TF
8	(D)......W2209	......	160	205	54000	▲19500	13.00/24D	14.00/24	Cum NHRS600	6-5⅛x6	743	...	800	300-2100	7-4½x16½	Y	Own W-2209	10	Own W2209	2F	H	** -6.30	Own W2209	LT4IA	780	1190	G	PX	90	10⅛x3½x⅜	LF
9	Sterling...HB1204	......	127	162	24000	▲10350	9.00/20	10.00/20	Wau 6MZA	6-4¼x4¾	404	5.6	290	130-3000	7-2⅝x12½	Y	Fu 5A43‡‡	10	T 72303DPH	2F	H	6.49-9.33	Tim F2090H	T4IHV	446	768	a	TX‡	67	9x3¼x¼	A
10	..........HA1304	......	160	178	26000	▲11000	10.00/20	11.00/20	Wau 6SRKR	6-4⅝x5⅛	517	5.5	369	125-2250	7-3x13⅛	Y	Fu 5A62♣♣	10	T 72303DPH	2F	H	6.49-9.33	Tim F2090H	T4IHV	446	768	a	TX‡	76	9x3¼x¼	A
11	..........HB1604	......	152	163	32000	▲12225	11.00/20	11.00/24	Wau 140GK	6-4½x5½	525	6.1	425	142-2250	7-3¼x15½	Y	Fu 5A62♣♣	10	Tim 1357W	2F	H	6.65-8.60	Tim F3110W	Ws4IA	644	984	a	TX‡	87	9¼x3⅝x⅜	A
12	......▼▼HB1904	......	152	163	38000	▲14925	12.00/20	12.00/24	Wau 145GK▼▼	6-5¼x6	779	6.2	585	186-2000	7-3½x18	Y	Fu 4A86♣♣	8	Tim 1758W	2F	H	7.33-10.2	Tim F409CW	Ws4IA	644	984	a	TX‡	87	9¼x3⅝x⅜	A
13	..........HB2254	......	152	163	44000	▲16350	12.00/20	13.00/24	Wau 145GKB	6-5¼x6	779	6.2	595	222-2100	7-3½x18	Y	Fu 4A86♣♣	8	Tim 79721W	2F	H	7.66-10.2	Tim F409CW	Ws4IA	684	1032	a	TX‡	87	9¼x3⅝x⅜	A
14	(D)...HB2254D	......	159	170	44000	▲16625	12.00/20	13.00/24	Cu NHBD600	6-5⅛x6	743	15.	537	200-2100	7-4½x13 11/16	Y	Fu 4A86♣♣	8	Tim 79721W	2F	H	7.66-10.2	Tim F409CW	Ws4IA	684	1032	a	TX‡	87	9¼x3⅝x⅜	A
15	Walter (c.f.)..FZM	......	126	150	24000	9000	12.00/20S	....	Wau MZA	6-4¼x4¾	404	5.6	290	125-2600	7-2⅝x12½	Y	Own FJN	6	Own MS	2	H	** -8.00	Own FJ	O4IA	470	670	G	FI	84	12x3½x½	B
16	(c.f.).......AEB	......	126	150	32000	13000	12.00/24S	....	Wau 140GZ	6-4⅝x5½	554	6.2	440	150-2250	7-3¼x14	Y	Own FC	6	Own FCC	2	H	** -9.00	Own FC	O4IA	585	890	G	FI	96	14x3¾x½	B
17	(c.f.).......AGB	......	138	162	32000	14000	12.00/24S	....	Wau 145GK	6-5¼x6	779	6.2	585	185-2000	7-3½x17¾	Y	Own FA	6	Own FCC	2	H	** -9.00	Own FC	O4IA	585	890	G	FI	108	14x3¾x½	B
18	(c.f.).......AGR	......	138	162	42000	15000	12.00/24D	....	Wau 145GK	6-5¼x6	779	6.2	585	185-2000	7-3½x17¾	Y	Own FA	6	Own FCR	2	H	** -9.00	Own FC	O4IA	585	890	G	FI	108	14x3¾x½	B
19	Ward La Fr...FD1	......	......	......	35000	▲11500	11.00/22	11.00/22	Cont 6513	6-4½x5¾	513	5.9	405	180-2800	7-3¼x14½	..	Ful 5A620	5	Tim R462W	S2	R	** -8.15	Tim F3100W	BW4IA	627	1029	Co	PM	.....	10x3x 5/16	C
20	(D).........FD2	......	......	......	35000	▲12000	11.00/24	11.00/24	Cum HB600	6-5⅛x6	672	17.	500	150-1800	7-4½x16¾	..	Ful 5A920	5	Tim R462W	S2	R	** -8.15	Tim F3100W	BW4IA	627	1029	Co	PM	.....	10x3x 5/16	C
21	Willys Jp....CJ-3B	1377	80	80	3500	*2191	6.00/16S	7.00/15S	Own CJ-3B	4-3⅛x4⅜	134	6.9	114	70-4000	3-2.33x5⅞	N	WG T90C	‡6	Spl 44-2	Hy½	H	** -5.38	Spl 25	B4IH	118	198	a	F	.....	4x1¾x 3/16	P
22	.......475-4WD	*1805	118	118	5300	*3115	7.00/16S	....	Own 475	4-3⅛x4⅜	134	6.9	114	72-4000	3-2.33x5⅞	N	WG T90C	‡6	Spl 53	H½	H	** -5.38	Spl 25	B4IH	176	276	a	2I	42.28	5½x2x 3/16	TD
23	......6226-4WD	......	118	118	5300	3200	7.00/16	7.00/16	Kai 6-226	6-3 5/16x4⅜	226	6.9	190	115-3650	4-2⅜x4⅞	N	Wg Sk4359gg	‡6	Tim 5140NX4	Sp	..	** -4.88	Spl 25	B4IH	176	276	a	2I	42 3/32	5½x2x 3/16	TD
	Six-Wheelers Wheels▼ Driven																														
	Corbitt																														
24	(D)...D803C46-2R	......	158	....	46000	......	10.00/22	11.00/24	Cum NHB600‡‡	6-5⅛x6	743	16.	535	200-2100	7-4½x16½	Y	Fu 5C720	5	Tim R300	2dF	H	4.93-5.91	Tim FE900	Tw6IA	934	1550	a	2M	68	8⅛x3¼x 3/16	TF
25	(t)(d) D80ZQ46-2R	......	158	....	46000	......	10.00/22	11.00/22	Cum HRB600‡‡	6-5⅛x6	743	16.	540	165-1800	7-4½x16½	Y	Fu 5C720	5	Tim R300	2dF	H	4.93-5.91	Tim FE900	Tw6IA	934	1550	a	2M	68	8⅛x3¼x 3/16	T
26	(t)(d)d803qj46‡-2R	......	136	....	46000	......	10.00/22	11.00/22	Cum NHB600‡‡	6-5⅛x6	743	16.	535	200-2100	7-4½x16½	Y	Fu 5C720	5	Tim R300	2dF	H	4.93-5.91	Tim FE900	Tw6IA	934	1550	a	2M	68	8x3¼x¼	T
27	(t)(d) d808qL46-2R	......	132	....	46000	......	10.00/22	11.00/22	Cu HRBB600‡‡	6-5⅛x6	743	16	505	180-2000	7-4½x16½	Y	Fu 5C720	5	Tim	2dF	L	....	Tim FE900	Tw6IA	934	1550	a	TD	70	8x3¼x¼	T
28	....G402R40-4R	......	173	....	40000	......	9.00/20	10.00/20	Cont T6427	6-4 7/16x4⅞	427	6.4	342	163-2800	7-2⅞x13½	Y	Fu 5A43	5	Tim SLD	2F	L	** -5.90	Tim FD900	Tw6IA	910	1342	a	TD	88	8⅛x3¼x 3/16	TF
29	....G402R46-4R	......	173	....	46000	......	10.00/20	11.00/20	Cont T6427	6-4 7/16x4⅞	427	6.4	342	163-2800	7-2⅞x13½	Y	Fu 5A43	5	Tim SQD	2F	L	** -5.78	Tim FE900	Tw6IA	934	1550	a	TD	88	8⅛x3¼x 3/16	TF
30	....G603R46-4R	......	181	....	46000	......	10.00/20	11.00/20	Cont R6602†	6-4⅞x5⅜	602	6.0	480	208-2600	7-3¼x14½	Y	Fu 5C65	5	Tim SQD	2F	L	** -5.78	Tim FE900	Tw6IA	934	1550	a	TD	88	8⅛x3¼x 3/16	TF
31	....G603R60-4R	......	181	....	60000	......	11.00/20	12.00/24	Cont R6602†	6-4⅞x5⅜	602	6.0	480	208-2600	7-3¼x14½	Y	Fu 5C65	5	Tim SFD4600	2F	L	** -8.07	Tim FE900	Tw6IA	1054	1762	a	TD	88	10½x3¼x¼	TFL
32	(D)...D404R40-4R	......	173	....	40000	......	9.00/20	10.00/20	Cum JBS600	6-4⅛x5	401	15.	360	150-2500	7-3⅞x7.8	Y	Fu 5A62	5	Tim SLD	2F	L	** -5.90	Tim FD900	Tw6IA	910	1342	a	TD	88	8⅛x3¼x 3/16	TF
33	(D)...D404R46-4R	......	173	....	46000	......	10.00/20	11.00/20	Cum JBS600	6-4⅛x5	401	15.	360	150-2500	7-3⅞x7.8	Y	Fu 5A62	5	Tim SQD	2F	L	** -5.78	Tim FE900	Tw6IA	934	1550	a	TD	88	00½x3¼x¼	TF
34	(D)...D803R46-4R	......	189	....	46000	......	10.00/20	11.00/20	Cum NHB600‡‡	6-5⅛x6	743	16	535	200-2100	7-4½x16½	Y	Fu 5C720	5	Tim SQD	2F	L	** -5.78	Tim FE900	Tw6IA	934	1550	a	TD	100	10½x3¼x¼	TFL
35	(D)...D803R60-4R	......	189	....	60000	......	11.00/20	12.00/24	Cum NHB600‡‡	6-5⅛x6	743	16	535	200-2100	7-4½x16½	Y	Fu 5C720	5	Tim SFD4600	2F	L	** -8.07	Tim FE900	Tw6IA	1054	1762	a	TD	100	10½x3¼x¼	TFL
36	(T)...G603V44-4R	......	181	....	44000	......	10.00/20	11.00/20	Cont R6602†	6-4⅞x5⅜	602	6.0	480	208-2600	7-3¼x14½	Y	Fu 5C650	5	Tim SQD	2F	L	** -5.78	Tim FD900	Tw6IA	934	1550	a	TD	88	10½x3¼x¼	TFL
37	(T)...G603V60-4R	......	181	....	60000	......	11.00/20	12.00/24	Cont R6602†	6-4⅞x5⅜	602	6.0	480	208-2600	7-3¼x14½	Y	Fu 5C650	5	Tim SFD4600	2F	L	** -8.07	Tim FE900	Tw6IA	1054	1762	a	TD	88	10½x3¼x¼	TFL
38	(t)(d).D803V46-4R	......	189	....	46000	......	10.00/20	11.00/20	Cum NHB600‡‡	6-5⅛x6	743	16.	535	200-2100	7-4½x16½	Y	Fu 4B86	8	Tim SQD	2F	L	** -5.78	Tim FE900	Tw6IA	934	1550	a	TD	100	10½x3¼x¼	TFL
39	(t)(d).D803V60-4R	......	189	....	60000	......	11.00/20	12.00/24	Cum NHB600‡‡	6-5⅛x6	743	16.	535	200-2100	7-4½x16½	Y	Fu 10A1120	10	Tim SFD4600	2F	L	** -8.07	Tim FE900	Tw6IA	1054	1762	a	TD	100	10½x3¼x¼	TFL
40	.....G402S40-All	......	Opt	....	40000	......	9.00/20	10.00/20	Cont T6427	6-4 7/16x4⅞	427	6.4	342	163-2800	7-2⅞x13½	Y	Fu 5A43	10	Tim SLD	2F	L	** -5.90	Tim F2090	Tw6IA	1008	1472	a	TD	Opt	8⅛x3¼x 3/16	TF
41	.....G603S46-All	......	Opt	....	46000	......	10.00/20	11.00/20	Cont R6602†	6-4⅞x5⅜	607	6.0	480	208-2600	7-3¼x14½	Y	Fu 5C65	10	Tim SFD3020	F	L	** -6.87	Tim F3200	Tw6IA	1032	1684	a	TD	Opt	10½x3¼x¼	TFL
42	(D)...D404S40-All	......	Opt	....	40000	......	9.00/20	10.00/20	Cum JBS600	6-4⅛x5	401	15.	360	150-2500	7-3⅞x7.8	Y	Fu 5A62	10	Tim SLD	2F	L	** -5.90	Tim F2090	Tw6IAz	1008	1472	a	TD	Opt	8⅛x3¼x 3/16	TF
43	(D)...D803S46-All	......	Opt	....	46000	......	10.00/20	11.00/20	Cum NHB600‡‡	6-5⅛x6	743	16	535	200-2100	7-4½x16½	Y	Fu 5C720	10	Tim SFD3020	2F	L	** -6.87	Tim F3200	Tw6IA	1032	1684	a	TD	Opt	10½x3¼x¼	TFL
44	.....G803S64-All	......	Opt	....	64000	......	11.00/20	12.00/24	Wau 145GKB	6-5¼x6	779	6.2	595	240-2400	7-3½x17¾	Y	Fu 5C720	10	Tim SFD4600	2F	L	** -8.07	Tim F409C	Tw6IA	1152	1892	a	TD	Opt	10½x3¼x¼	TFL
45	Dodge...C-1-YX6	▲9097	154	190	40000	12200	10.00/20D	10.00/20	Own T-353	6-4 7/16x5 7/16	413	6.5	343	171-3200	7-3x11.24	Y	Cla 290V2	5	T SD3010	ASF	L	** -8.27	Tim FD900	TD6IA	912	1262	c	TX	84	10½x3 3/16x 3/16	CC
46	Duplex.......TH6	......	162	220	30000	9180	8.25/20	9.00/20	Her JXD	6-4x4¼	320	6.2	240	113-3000	7-2½x10 11/16	Y	Fu 5B33‡	10	Tim SBD1055	BF	L	**-6.16	Tim 32502H	L6IHV	513	839	a	TX	83¾	9⅛x3⅛x 3/16	L
47	..........RH-6	......	160	208	40000	11500	10.00/20	11.00/20	Her WXLC3	6-4⅛x4¾	404	5.8	312	139-2600	7-2⅝x13¼	Y	Fu 5A43	5	Tim SD3010	2F	R	8.27	Tim FD900	WS61A	1075	1525	a	TX	73¼	10⅛x3½x 3/16	L
48	(D)...........L6	......	172	208	45000	15000	11.00/20	12.00/20	Cum HB600	6-4⅞x6	672	17.	495	150-1800	7-4½x16½	Y	Fu 5A920	5	Tim SD454	SF2	L	6.8-8.15	Tim FE900	Ws6IA	1137	1625	a	TX	77⅝	10⅛x3⅛x 3/16	L
49	Federal.......6554	......	189	225	45000	14950	10.00/20	11.00/20	Con R6602‡‡	6-4⅞x5⅜	602	6.4	480	205-3000	7-3¼x14½	Y	Fu 5A65▼	15	T SW3456†	WF	R	** -6.16	Tim FE900	Ws6IA	1082	1569	a	TD	108	10⅛x3½x 3/16	TfL
50	6654	......	189	225	60000	16930	11.00/22	12.00/20	Con R6602‡‡	6-4⅞x5⅜	602	6.4	480	205-3000	7-3¼x14½	Y	Fu 5A65▼	12	Tim SFD4600	WF	R	** -7.6	Tim 27452W	Ws6IA	1308	1888	a	TD	108	10⅛x3½x 3/16	TfL
51	2952	......	160	196	34000	9810	9.00/20	9.00/20	Her JXDF	6-4x4¼	320	6.5	254	125-3200	7-2½x10 11/16	Y	Cla 205V‡‡△	10	TSBD1555dph	SF	R	7.53 10.35	Tim 32514H	LT61HV	544	914	a	TX	84	9 3/16x3⅛x 3/16	TL
52	3052	......	160	196	34000	9845	9.00/20	9.00/20	Her JXLDF	6-4x4½	339	6.5	288	142-3200	7-2½x10 11/16	Y	Cla 205V‡‡△	10	TSBD1555dph	SF	R	7.53 10.35	Tim 32514H	LT61HV	544	914	a	TX	84	9 3/16x3⅛x¼	TL
53	3452	......	160	196	34000	10630	9.00/20	9.00/20	Con T6371F	6-4⅛x4⅝	371	6.4	297	145-3000	7-2⅞x13½	Y	Cla 290V▲	10	TSBD1555dph	SF	R	8.33 11.47	Tim FD900	LT61HV	752	1132	a	TX	84½	10⅛x3½x 3/16	TL
54	4551	......	167	215	44000	12515	10.00/20	11.00/20	Con T64271‡‡	6-4 7/16x4⅞	427	6.4	350	166-3000	7-2⅞x13½	Y	Cla 290V	5	T-SD3020P♦	BR	R	** -9.16	Tim FD900	Ws6IA	1073	1550	a	TD	84½	10⅛x3½x 3/16	TfL
55	2953	......	160	196	36000	9620	9.00/20	9.00/20	Her JXDF	6-4x4¼	320	6.5	254	125-3200	7-2½x10 11/16	Y	Cla 205V	5	TSFD 157	DR	R	7.66-....	Tim 32514	LT61HV	660	1338	a	TX	84	9 3/16x3⅛x 3/16	TL
56	3053	......	160	196	36000	9655	9.00/20	9.00/20	Her JXLDF	6-4x4½	339	6.5	288	142-3200	7-2½x10 11/16	Y	Cla 205V	5	TSFD 157	DR	R	7.66-....	Tim 32514	LT61HV	660	1338	a	TX	84	9 3/16x3⅛x 3/16	TL
57	2954	......	160	196	38000	9970	9.00/20D	9.00/20	Her JXDF	6-4x4¼	320	6.5	254	125-3200	7-2½x10 11/16	..	Cla 205V	5	Tim SFD157	DR	R	....	Tim 32514	DHT6	660	1338	...	TD	84	9 3/16x3⅛x 3/16	....
58	3054	......	160	196	38000	10005	9.00/20D	9.00/20	Her JXLDF	6-4x4½	339	6.5	288	142-3200	7-2½x10 11/16	..	Cla 205V	5	Tim SFD157	DR	R	....	Tim 32514	DHT6	660	1338	...	TD	84	9 3/16x3⅛x 3/16	....
59	3454	......	160	196	38000	10790	9.00/20D	9.00/20	Con T6371F	6-4⅛x4⅝	371	6.4	297	145-3000	7-2½x10 11/16	..	Cla 290V	5	Tim SFD157	DR	R	....	Tim FC900	DHT6	660	1338	...	TD	84	9 3/16x3⅛x 3/16	....
60	4554	......	179	215	44000	12765	10.00/20D	11.00/20	Con T6422F	6-4 7/16x4⅞	427	6.4	350	166-3000	7-2⅞x13½	..	Cla 290V	5	Tim SD3020	DR	R	....	Tim FE900	DHT6	1054	1550	...	TX	84	10⅛x3½x 3/16	TL
61	(D).......D6501	......	150	209	40000	11890	11.00/22D	12.00/20	Con R6602F	6-5⅛x6	743	6.4	480	200-2100	7-4½x13⅝	..	Ful 5A65S	5	Tim U200	SF	R	....	Tim FE900	LT4IVH	722	1051	...	TX	60½	10⅛x3½x 3/16	TL
62	(D).......D6502	......	150	209	40000	12040	11.00/22D	12.00/20	Con R6602F	6-5⅛x6	743	6.4	480	200-2100	7-4½x13⅝	..	Ful 5A65S	5	Tim U300	dF	R	....	Tim FE900	LT4IVH	722	1051	...	TX	60½	10⅛x3½x 3/16	TL
63	FWD.........6-300	......	148	Opt	30000	▲13200	8.25/20D	10.00/20	Wau 195GKA	6-4⅛x4¼	320	6.2	243	125-3200	4-2⅝x7⅛	Y	Own 25	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHV	673	1130	a	T6	84	9¼x3x⅜	TF
64	6-322	......	148	Opt	32000	▲13600	8.25/20D	10.00/20	Wau 135GKB	6-4¼x5	426	6.3	337	148-2800	7-3¼x14	Y	Own 25	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHV	673	1130	a	T6	84	9¼x3x⅜	TF
65	6-323	......	148	Opt	32000	▲13600	8.25/20D	10.00/20	Wau 135GZB	6-4⅜x5	451	6.3	354	153-2800	7-3¼x14	Y	Own 25	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHV	673	1130	a	T6	84	9¼x3x⅜	TF
66	6-364	......	148	Opt	36000	▲14000	9.00/20D	10.00/20	Wau 140GK	6-4½x5½	525	6.4	420	160-2400	7-3¼x13 11/16	Y	Ful 5C65	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHA	673	1130	a	T6	84	9¼x3x⅜	TF
67	6-365	......	148	Opt	36000	▲14000	9.00/20D	10.00/20	Wau 140GKB	6-4½x5½	525	6.4	425	172-2600	7-3¼x13 11/16	Y	Ful 5C65	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHA	673	1130	a	T6	84	9¼x3x⅜	TF
68	(D).....6-364D	......	148	Opt	36000	▲14250	9.00/20D	10.00/20	GMC 4-71	4-4¼x5	284	16.	400	150-2100	5-3½x5⅝	Y	Ful 5C65	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHA	673	1130	a	T6	84	9¼x3x⅜	TF
69	(D).....6-368D	......	148	Opt	36000	▲14250	9.00/20D	10.00/20	CumHRBB-600	6-5⅛x6	743	16.	505	180-2000	7-4½x....	Y	Ful 5C72	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHA	673	1130	a	T6	84	9¼x3x⅜	TF

(Turn to Page 164, Please)

For Key to References and Abbreviations See Page 151

TORTURE TRACK *25.5 MILES LONG!*



PROFILE OF AMERICAN BRAKEBLOK TEST ROUTE NO. 1
ON U. S. 30 FROM LAUREL SUMMIT TO BOTTOM OF GRANDVIEW.

. . . to develop the best brake lining for you

American Brakeblok Test Trucks follow this course daily. Under all conditions of load the lining is put through every possible test—performance, fade, recovery, moisture sensitivity, wear, glaze, and maximum heat resistance. Accurate instrumentation records test data for interpretation by our research staff.

The mountains of Pennsylvania were selected because of their sharp grades, long descents, hairpin curves and dangerous intersections, giving the best opportunity for testing brake lining through a wide range of operating conditions.

On this track . . . today's brake linings are perfected—tomorrow's proven . . . for maximum safety, performance and life.

American Brakeblok

AMERICA'S SAFETY BRAKE LINING

AMERICAN Brake Shoe COMPANY

AMERICAN BRAKEBLOK DIVISION
DETROIT 9, MICHIGAN

Plants in: Detroit, Michigan; Winchester, Virginia; Lindsay, Ontario; Gif, France

(Continued from Page 162)

Line Number	MAKE AND MODEL	Chassis List Price	WHEELBASE Minimum Standard	WHEELBASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear: Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number Diameter and Length	Governor Standard	TRANSMISSION: Make and Model	Forward Speeds	REAR AXLE: Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE: Make and Model	BRAKES SERVICE: Make Location Type Operation	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME: Side Rail Dimensions	Type
	FWD—Cont'd																														
1	6-406		148	Opt	40000	▲14500	10.00/20D	10.00/20	Wau 140GZB	6-4⅝x5½	554	6.4	448	188-2600	7-3¼x13⅜	Y	Ful 5C65	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHA	673	1130	a	T6	84	9¼x3x⅜	TF
2	(D) 6-406D		148	Opt	40000	▲15200	10.00/20D	10.00/20	GMC 6-71	6-4¼x5	426	16.	600	200-2000	7-3½x7⅞	Y	Ful 5A1120	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHA	673	1130	a	T6	84	9¼x3x⅜	TF
3	(D) 6-409D		148	Opt	40000	▲15500	10.00/20D	10.00/20	Cum NHB-600	6-5½x6	743	16.	535	200-2100	7-4½x. .	Y	Ful 5C720	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHA	673	1130	a	T6		9¼x3x⅜	TF
4	G6-405		184½	184½	40000	▲14650	10.00/20D	10.00/20	Wau 140GKB	6-4½x5½	525	6.	425	172-2600	7-3¼x13⅜	Y	Ful 5C65	20	Own 6-23	SF	L	** -5.28	Own 22	Wg6IA	1008	1451	a	T6		9¼x3x⅜	TF
5	L6-408		217	217	40000	▲14950	10.00/22D	10.00/22	Wau 145GK	6-5½x6	779	6.2	595	216-2100	7-3½x17¾	Y	Ful R95C	20	Own 6-23	SF	L	** -5.28	Own 22	Wg6IA	1008	1451	a	T6		9¼x3x⅜	TF
6	(D) L6-406D		217		40000	▲15300	10.00/22D	10.00/22	GMC 6-71	6-4¼x5	426	16.	600	200-2000	7-3½x7⅞	Y	Ful R95C	20	Own 6-23	SF	L	** -5.28	Own 22	Wg6IA	1008	1451	a	T6		9¼x3x⅜	TF
7	(D) L6-409D		217		40000	▲15450	10.00/22D	10.00/22	Cum NHB-600	6-5½x6	743	16.	535	200-2100	7-4½x. .	Y	Own 55	10	Own 6-33	SF	L	** -6.14	Own 32	Wg6IA	1234	1885	a	T6		10x3x⅛	C
8	6-609		192		60000	▲17500	12.00/20D	12.00/20	Wau 145GKB	6-5¼x6	779	6.2	595	240-2400	7-3½x17¾	Y	Own 55	10	Own 6-33	SF	L	** -6.14	Own 32	Wg6IA	1234	1885	a	T6		10x3x⅛	C
9	(D) 6-606D		192		60000	▲17850	12.00/20D	12.00/20	GMC 6-71	6-4¼x5	426	16.	600	200-2000	7-3½x7⅞	Y	Own 55	10	Own 6-33	SF	L	** -6.14	Own 32	Wg6IA	1234	1885	a	T6		10x3x⅛	C
10	(D) 6-609D		192		60000	▲18000	12.00/20D	12.00/20	Cum NHB-600	6-5½x6	743	16.	535	200-2100	7-4½x. .	Y	Own 55	10	Own 6-33	SF	L	** -6.14	Own 32	Wg6IA	1234	1885	a	T6		10x3x⅛	C
11	Kenworth (D) ■522		191	255	42000	14250	10.00/20	11.00/22	Cum HRB-600	6-5½x6	743	16	540	165-1800	7-4½x16⅛	Y	BL 8241	4	T U200PA♦♦	2F	H	5.91-9.76	Tim FE900N	Ws4IA	880	1368	a	TD	100	9¼x3¼x⅛	C
12	(D) ■523 4R		190	255	42000	15300	10.00/20	11.00/22	Cum HRB-600	6-5½x6	743	16	540	165-1800	7-4½x16⅛	Y	BL 8241	4	Tim SQW	WF	L	5.67-8.20	Tim FE900N	Ws4rIA	868	1400	a	TD	99	9¼x3¼x⅛	C
13	(D) ■524 4R		190	255	60000	16500	10.00/20	11.00/22	Cum HRB-600	6-5½x6	743	16	540	165-1800	7-4½x16⅛	Y	BL 8241	4	Tim SW456P	WF	L	4.72-8.20	Tim FE900N	Ws4rIA	1016	1556	a	TD	99	9¼x3¼x⅛	C
14	(D) 548 4R		201		65000	20150	11.00/22	12.00/24	Cum HRB-600	6-5½x6	743	16	540	165-1800	7-4½x16⅛	Y	BL 8241	4	Tim SFD4600	B2F	L	8.07-11.6	TimFe900DPA	Ws6rIA	1080	1785	a	TD	112¼	9¼x3¼x⅛	DB
15	(D) 552.6		178		54000	22500	13.00/24	13.00/24	Cum HRB-600	6-5½x6	743	16	540	165-1800	7-4½x16⅛	Y	BL 8241	4	Ti GSWQFR2	WF	L	5.67-8.20	Tim FE900N	Ws4rIA	1016	1556	a	TD	99	9¼x3¼x⅛	C
16	(D) ■825 4R		190	255	42000	14600	10.00/20	11.00/22	Cum HRB-600	6-5½x6	743	16	540	165-1800	7-4½x16⅛	Y	BL 8241	4	Tim SQD	B2F	L	5.78-9.21	Tim FE900N	Ws4rIA	868	1400	a	TD	93	9¼x3¼x⅛	C
17	829 4R		175½	255	42000	14300	10.00/20	11.00/22	LeR H540	8-4¼x4¼	540	6.7	460	200-2600	7-3x13⅜	Y	Fu 5C650	5	Tim SQD	B2F	L	5.78-9.21	Tim FE900N	Ws4rIA	868	1400	a	TD	93	9¼x3¼x⅛	C
18	(D) 848-4R		210½	234½	66000	20000	11.00/22	14.00/24	Cum HRB600	6-5½x6	743	16.	540	165-1800	7-4½x16⅛	Y	BL-8241▲	4	Tim SFD4600	B2F	L	8.07-11.6	TimFE900DPA	Ws6rIA	1080	1785	a	TD	118¾	Variable	C
19	(D) 849-4R		210½	234½	66000	21700	12.00/24	14.00/24	Cum HRB600	6-5½x6	743	16.	540	165-1800	7-4½x16⅛	Y	BL-8241▲	4	Tim SFD4600	B2F	L	8.07-11.6	Tim 27436W	Ws6rIA	1080	1785	a	TD	118¾	Variable	C
20	(D) *850-4R		210½	234½	66000	21900	12.00/24	14.00/24	Cum HRB600	6-5½x6	743	16.	540	165-1800	7-4½x16⅛	Y	BL-8241▲	4	Tim SFD4600	B2F	L	8.07-11.6	Tim 27436W	Ws6rIA	1080	1785	a	TD	118¾	Variable	C
	Marmon-Herr.																														
21	M-756		156	216	35000	10200	9.00/20D	10.00/20	Ford	8-3 56x3	279	7.0	244	145-3800	5-2⅜x5¼	Y	Ford	10	Ford	H	H	** -7.2	Own	F6HV	772	1161	a	PX	84½	9x3x¼	L
22	CM-756		140	180	35000	10250	9.00/20D	10.00/20	Ford	8-3 56x3	279	7.0	244	145-3800	5-2⅜x5¾	Y	Ford	10	Ford	H	H	** -7.2	Own	F6HV	772	1161	a	PX	90	9x3x¼	L
	Oshkosh																														
23	W712-6X6		178	Opt	45000	▲17400	11.00/20D	12.00/20	Her RXLDH	6-4¾x5¼	558	. . .	462	190-2600	7-3½x13¼	Y	Own W712-6x6	10	Tim SD-3020	2F	L	** -6.1	Own W-712	LT6IA	1156	1889	. . .	PX	110	10⅞-3½-⅜	B
24	**W1602		Opt	Opt	95000	. . . . .	14.00/24D	14.00/24	Optional	. . . . .	. . .	. . .	. . .	. . . . .	. . . . .		△		Tim SD472	2F	L	. . . . .	Own WA-1602	LT6IA	. . .	2217	. . .	Opt	Opt	12⅜-3⅞-⅜	B
25	**WA1600		Opt	Opt	60000	. . . . .	11.00/24D	12.00/24	Optional	. . . . .	. . .	. . .	. . .	. . . . .	. . . . .		△		Tim SFD4600	2F	L	. . . . .	Own WA-1600	LT6IA	1156	1189	. . .	Opt	Opt	12⅜-3⅞-⅜	B
26	Peterbilt (D) 350		193	Opt	36000	. . . . .	10.00/20D	11.00/22	Cum NHB600	6-5½x6	743	17.	500	200-2100	7-4½x16½	Y	Spi 8041	12	Tim SW-3456	WF	R	6.16-6.80	TimFe900DPA	Ws6IA	1125	1569	. . .	TD	99½	10¾x3½x⅝	CT
27	(D) 360		198	Opt	36000	. . . . .	10.00/20D	11.00/22	Cum NHB600	6-5½x6	743	17.	500	200-2100	7-4½x16½	Y	Spi 8041	12	Tim SW-459	WF	R	6.16-6.80	TimFe900DPA	Ws6IA	1005	1517	. . .	TD	104⅞	10¾x3½x⅝	CT
28	(D) 370		198	Opt	44000	. . . . .	10.00/20D	11.00/22	Cum NHB600	6-5½x6	743	17.	500	200-2100	7-4½x16½	Y	Spi 8041	12	Tim SW-459	WF	R	6.16-6.80	T 27463	Ws6IA	1084	1626	. . .	TD	104⅞	10¾x3½x⅝	CT
29	(D) 380		194	Opt	44000	. . . . .	10.00/20D	11.00/22	Cum NHB600	6-5½x6	743	17	500	200-2100	7-4½x16½	Y	Spi 8041	12	Tim SFD4600	2F	R	**-10 .16	T 27463	Ws6IA	1084	1626	. . .	TD	98½	10¾x3½x⅝	CT
30	(D) 390		197	Opt	79000	. . . . .	12.00/24	14.00/24	Cum NHB600	6-5½x6	743	17.	500	200-2100	7-4½x16½	Y	Spi 8041	12	Tim SD472W	2F	R	**-10 .16	T 27463	Ws6IA	1622	2215	. . .	TD	103½	10¾x3½x⅝	CT
31	(D) 350(coe)		135	Opt	36000	. . . . .	10.00/20	11.00/22	Cum NHB600	6-5½x6	743	17.	500	200-2100	7-4½x16½	Y	Spi 8041	12	SW 3456	WF	R	6.16-6.80	TimFe900DPA	Ws6IA	1125	1569	. . .	TD	93	10¾x3½x⅝	CT
32	(D) 360(coe)		135	Opt	36000	. . . . .	10.00/20	11.00/22	Cum NHB600	6-5½x6	743	17.	500	200-2100	7-4½x16½	Y	Spi 8041	12	SW 459	WF	R	6.16-6.80	TimFe900DPA	Ws6IA	1005	1517	. . .	TD	93	10¾x3½x⅝	CT
33	Reo F-226		150	203	40000	9975	9.00/20	10.00/20	Own 331♦	6-3⅞x4½	331	6.4	264	140-3200	7-2½x9.408	Y	Cla 205V	5	Tim SFD157	F2	T	6.41-7.66	Tim FD900	T6IVH	806	1134	var	TX	85½	9¼x3⅜x⅛	TF
34	F-506		150	203	40000	10090	9.00/20	10.00/20	Own 160	6-4¼x4½	331	6.7	290	160-3200	7-2¾x9⅛	Y	Cla 265V	5	Tim SFD-157	F2	T	7.66-9.33	Tim FD-900	T6IVH	806	1134	var	TX	85½	9¼x3⅜x⅛	TF
35	F-236		169	200	45000	11925	10.00/20	11.00/20	Con T6427	6-4⅞x4¾	427	6.4	348	163-2800	7-2⅞x12.1	Y	Cla 290V	5	Tim SFD3020	F2	T	7.5 .	Tim FE-900	TW s6IA	934	1570	var	TD	104⅜	9¼x3⅜x⅛	TF
36	F-236-D		169	200	45000	12555	10.00/20	11.00/20	Cum JBS 600*	6-4½x5	407	15.	360	150-2500	7-3⅝x7.8	4	Cla 292VO	5	Tim SFD3020	F2	T	7.5 .	Tim FE900	TW s6IA	934	1570	var	TD	104⅜	9¼x3⅜x⅛	TF
37	F-226-M		150	203	45500	11385	11.00/20†	11.00/20†	Own 331♦‡	6-3⅞x4½	331	6.4	264	140-3200	7-2½x9.408	Y	Cla 205V	5	Tim SFD157	F2	T	** -9.33	Tim 27461	TW s6IA	938	1570	var	TD	85⅝	9¼x3⅜x⅛	TF
38	F-226 (6x6)		150	203	60000	11325	9.00/20	10.00/20	Own 331♦‡	6-3⅞x4½	331	6.4	264	140-3200	7-2½x9.408	Y	Cla 205V	5	Tim SFD157	F2	T	** -7.66	Tim F-2090	TW s6IA	1008	1361	var	TD	90	9¼x3⅜x⅛	TF
39	F-536-M		155	200	50000	12140	11.00/20†	11.00/22†	Own 160	6-4½x4½	331	6.7	290	160-3200	7-2¾x9⅛	Y	Cla 265V	5	Tim SFD3020	F2	T	** -9.21	Tim 27461	TW s6IA	962	1570	var	TD	122	9¼x3⅜x⅛	TF
40	Sterling HA1605		164	235	32000	▲12400	9.00/20	10.00/20	Wau 6MZA	6-4¼x4¾	404	5.6	290	130-3000	7-2¾x12½	Y	Fu 5A43	5	T SBD1555P‡	SF	L	6.80-13.1	T FD900DPA	Ws6IA	786	1138	a	TX	83	9x3¼x⅛	A
41	HA1805		164	235	36000	▲13100	10.00/20	11.00/20	Wau 6MZA	6-4¼x4¾	404	5.6	290	130-3000	7-2¾x12½	Y	Fu5A43-3A65	15	Tim SD3020P	2F	L	6.84-10.2	T FD900DP	W s6IA	954	1554	a	TX♦	83	9x3¼x⅛	A
42	HB2205		168	231	44000	▲14550	11.00/20	11.00/22	Wau 140GK	6-4½x5½	525	6.1	425	142-2250	7-3¼x15½	Y	Fu5A62-3A65	15	Tim SD3020P	2F	L	6.84-10.2	T FE900DPA	W s6IA	934	1554	a	TX♦	92	9¼x3⅜x⅜	A
43	▼▼HB2755		168	231	55000	▲15850	11.00/24	12.00/24	Wau 140GKB▼▼	6-4½x5½	525	6.4	425	172-2700	7-3¼x15½	Y	Fu5A62-3A65	15	Tim SW456P	WF	L	5.67-8.20	Tim 27462W	W s6IA	1164	1892	a	TX♦	92	9¼x3⅜x⅜	A
44	(D) HA2605D		188	251	52000	▲17950	11.00/20	12.00/24	Cum NHB600	6-5½x6	743	15.	537	200-2100	7-4¼x13⅜	Y	Fu4A86-3A92	12	Tim SW456P	WF	L	5.67-8.20	Tim 27462W	W s6IA	1164	1892	a	TX♦	92	9¼x3⅜x⅜	A
45	(D) TA2105D		188	251	42000	▲16250	10.00/20	10.00/22	Cum NHB600	6-5½x6	743	15.	537	200-2100	7-4½x13⅜	Y	Fu4A86-3A92	12	Tim SW3012P	WF	L	4.71-6.17	Tim FE900DP	W s6IA	934	1554	a	TX♦	92	9x3¼x¼	A
46	(D) TA2115D		188	251	42000	▲16375	11.00/20	11.00/22	Cum NHB600	6-5½x6	743	15.	537	200-2100	7-4½x13⅜	Y	Fu4A86-3A92	12	Tim SW3012P	WF	L	4.71-6.17	Tim FE900DPA	W s6IA	1054	1782	a	TX♦	92	9¼x3⅜x⅜	A
47	▼▼HB2516		168	231	50000	▲15500	11.00/20	11.00/24	Wau 140GK▼▼	6-4½x5½	525	6.1	425	142-2250	7-3¼x15½	Y	Fu5A62-3A65	15	Own 196W	CD	R	6.04-7.31	T FE900DPA	W s6IA	1280	1988	a	TX♦	92	9¼x3⅜x⅜	A
48	▼▼HB2756		168	231	55000	▲16750	11.00/24	12.00/24	Wau 140GKB▼▼	6-4½x5½	525	6.4	425	172-2700	7-3¼x15½	Y	Fu5A62-3A65	15	Own 230W	CD	R	6.04-7.31	Tim 27462W	W s6IA	1280	1988	a	TX♦	92	9¼x3⅜x⅜	A
49	(D) HB3006D		168	231	60000	▲20000	11.00/24	12.00/24	Cum HBD600	6-4¾x6	672	17	495	150-1800	7-4½x13⅜	Y	Fu4A86-3A92	12	Own 320W	CD	R	10.4-13.2	Tim 27462W	W s6IA	1280	1988	a	JX	92	9¼x3⅜x⅜	A
50	(D) HB3506D		181	192	70000	▲23750	12.00/24†	13.00/24▼	Cum HBD600	6-4¾x6	672	17	495	150-1800	7-4½x13⅜	Y	Fu4A86-3A92	12	Own 330W	CD	R	10.4-13.2	Tim 27462W	W s6IA	1280	1988	a	JX	98	11¼x3⅝x⅜	A
51	(D) HB4506D		181	192	90000	▲27300	14.00/24*	14.00/24▼	Cu NHBD600	6-5½x6	743	15.	537	200-2100	7-4½x13⅜	Y	F4A112-3A92	12	Own 340W	CD	R	** -11.59	Shw FE18A34	W s6IA	1238	1988	a	JX	98	11¼x3⅝x⅜	A
52	(D) SF6506D		190	190	130000	▲44500	16.00/24*	16.00/24	Bu 8DA1125	8-5¼x6½	●	13.	855	287-2100	9-3¾x21⅝	Y	F4A112-3A92	12	Own 500W	CD	R	** -14.88	Tim FU900P	W s6IA	2066	2748	a	JX	140	15x18⅛x⅝	A1
53	(D) SF7506D		190	190	150000	▲46500	18.00/24*	18.00/24*	Bu 8DAS1125	8-5¼x6½	●	13.	980	350-2100	9-3¾x21⅝	Y	F4A112-3A92	12	Own 500W	CD	R	** -14.88	Tim FU900P	W s6IA	2066	2748	a	JX	140	15x18⅛x⅝	A1
	Truckstell																														
54	(C) F600 4R		152	221	28000	7960▲	7.50/20	8.25/20	Ford	8-3 1x3¼	239	6.	8	194	106-3500	3-2¼x12.7	. .	Ford ♦♦	12	Ford	HF	R	** -6.8	Ford	F6IHV	612	836	Co	TX	82	9⅛x3x⅛	C▼
55	(C) F700 4R		153	225	32000	8980▲	7.50/20	9.00/20	Ford	8-3½x4	254	6.	8	212	112-3500	4-2⅝x13.8	. .	Ford ♦♦	12	Ford	HF	R	** -7.2	Ford	F6IHV	755	1169	Co	TX	82	9⅝x3x⅛	C▼
56	(C) F750 4R		153	225	34000	9350▲	8.25/20	9.00/20	Ford	8-3½x3½	279	7.	1	244	145-3800	5-2⅝x15	. .	Ford ♦♦	15	Ford	HF	R	** -7.2	Ford	F6IHV	755	1169	Co	TX	82	9⅝x3x .65	C▼
57	(C) F800 4R		153	225	40000	10170▲	9.00/20	10.00/20	Ford	8-3 8x3½	317	7.	1	284	155-3900	5-2⅝x15	. .	Ford ♦♦	15	Ford	SF	R	** -7.17	Ford	†	856	1231	Co	TX	82	9⅝x3x .65	C▼
58	(C) F900 4R		153	225	48000	11640▲	10.00/20	11.00/20	Ford	8-3 8x3½	317	7.	1	284	155-3900	5-2⅝x15	. .	Ford ♦♦	15	Ford	SF	R	** -7.17	Ford	†	950	1370	Co	TX	82	9⅝x3x .65	C▼
59	(C) C5403 4R		126	204	28000	7800▲	7.50/20	9.00/20	Chev.	6-3⅞x3½	235	6.	7	193	105-3600	4-St. Chev.	. .	Chev. ♦♦	12	Chev.	HF	R	** -6.17	Chev.	C6IHV	612	836	Co	TX	82	9⅝x3x⅛	C▼
60	(C) C6103 4R		160	229	30000	7650▲	7.50/20	9.00/20-10	Chev.	6-3⅞x3½	235	7.	1	200	108-3500	4-St. Chev.	. .	Chev. ♦♦	12	Chev.	HyF	R	** -6.17	Chev.	C6IHV	607	930	Co	TIX	83	9⅝x3x⅛	C▼
61	Ward La Fr. DIT‡		180	220	39500	. . . . .	10.00/20	11.00/20	Con T6427	6-4⅞x4⅞	427	. . .	340	152-2600	. . . . .	. .	Fu 5A43♦♦	15	Tim SD3010P	2F	L	** -8.27	Tim FD900	T4IA	. . .	. . .	D	. . .	. . .	10x3½x⅜	C
62	D3T▲▲		180	220	39500	. . . . .	10.00/20	11.00/20	Con R6572	6-4¾x5¾	572	. . .	440	198-2600	. . . . .	. .	Fu 5C65♦♦	15	Tim SD3010P	2F	L	** -7.50	Tim FD900	T4IA	. . .	. . .	D	. . .	. . .	10x3½x⅜	CC
63	D3ST▲▲		180	220	39500	. . . . .	10.00/20	11.00/20	Con R6602	6-4¾x5¾	602	. . .	463	206-2600	. . . . .	. .	Fu 5C65♦♦	15	Tim SD3010P	2F	L	** -7.50	Tim FD900	T4IA	. . .	. . .	D	. . .	. . .	10x3½x⅜	CC
64	(D) D5T▲▲		180	220	42000	. . . . .	11.00/20	11.00/20	Cum HB600	6-4⅞x6	672	. . .	500	150-1800	. . . . .	. .	Fu 5C72♦♦	15	Tim SD3010P	2F	L	** -6.84	Tim FE900	T4IA	. . .	. . .	D	. . .	. . .	10x3½x⅜	C
65	(D) D5RT▲▲		180	220	42000	. . . . .	11.00/20	11.00/20	Cum HRB600	6-5½x6	743	. . .	540	165-1800	. . . . .	. .	Fu 5C72♦♦	15	Tim SD3010P	2F	L	** -6.84	Tim FE900	T4IA	. . .	. . .	D	. . .	. . .	10x3½x⅜	C
66	(D) D5NT▲▲		180	220	42000	. . . . .	11.00/20	11.00/20	Cum NHB600	6-5½x6	743	. . .	540	200-2100	. . . . .	. .	Fu 5C72♦♦	15	T SW3012PA	WF	L	** -6.17	Tim FE900	T4IA	. . .	. . .	D	. . .	. . .	10x3½x⅜	C
	White-Freightliner																														
67	(c.o.e.) WF64		178			13500	10.00/22		Cum NHB	6-5½x6	743	13	575	200-2100	7-4½x16½	Y	Spi 8041	12	Own	WF	H	** -6.00	Tim 27061	O4rIA	966	1450	a	TD	136	10⅜x3½x¼	D
68	(c.o.e.) WF64T		156			13800	10.00/22		Cum NHB	6-5½x6	743	13	575	200-2100	7-4½x16½	Y	Fu 10B1120	10	Own	WF	H	** -6.00	Tim 27061	O4rIA	966	1450	a	TD	94	10⅜x3½x¼	DL

For Key to References and Abbreviations See Page 151

Fan Belt Data

*—Fan and generator.
■—Water pump and compressor.
†—Matched pairs.
‡—Diesel.
a—Water pump and generator.
b—Air compressor.
c—Generator.
d—Alternator.
e—Fan.
f—Fan high mount.
g—Two belts used with power steering.
h—Steering booster pump.

PASSENGER CARS

Vehicle Make and Model	Engine Make or Model	Circumference (In.)	Width (In.)	Angle of "V" (Deg.)
Chevrolet				
All	....	42½	3/8	41
Dodge				
6*	....	63.8	3/8	36
Ford				
6*g	....	37	3/8	38
8*g	....	44	3/8	38
Plymouth				
All	....	49	3/8	36
Pontiac				
6	....	40	11/32	34
Studebaker				
6	....	40.3	11/32	38

BUSES

Vehicle Make and Model	Engine Make or Model	Circumference (In.)	Width (In.)	Angle of "V" (Deg.)
Beaver				
*	IHC 54181-RI	....	3/8	38
b	IHC 83816-HA	....	1	38
Beck				
9000 Mainliner	Cum	77(2)	½	42
Fitzjohn				
310 Cityliner	Her JXLD	56	.938	44
FTG Cityl'r.	Her JXLD	56	.938	44
FTG Cityl'r.	Her WXLD	66 9/32	11/32	32
FTD Cityl'r.	Her DWXLD	66 9/32	11/32	32
510 Dural'r.	Her JXLD	58	.938	44
635Sup.Dur.	Wau 140GK	65½	1 1/16	46
Fixible				
218B1-54	....	64 13/32	13/32	40
218B1-54	....	41 5/8	11/32	40
218JBS1-54.	....	53 5/8	11/32	40
218F1-54	....	60 5/8	11/32	40
218F1-54	....	41 1/8	11/32	40
Fixible—				
Twin Coach.	....	42 7/8	3/8	40
Used on all				
models	....	49 1/8	11/32	35
	....	47	11/32	40
G.M.C.				
C-270	....	45 11/32	¾	38
Marmon-Herrington				
8MB-18732-A (Air compressor)		40 5/8	13/32	38
8MB-8620A1 & 2		47¼	5/8	32
Southern				
†S-41HF, S-45HF	....	42 1/8	3/8	40b
	....	44 3/8	11/32	40b
†S-45DHC.	....	40 3/4	11/32	40d
	....	40	13/32	h
	....	40 3/4	11/32	40d
Air compressor		Cummins 69594		
Water pump		Cummins 69581		
Transit				
*01	....	63 5/8	5/8	38
(Alternator).	....	38 5/8	5/8	38

TRUCKS

Vehicle Make and Model	Engine Make or Model	Circumference (In.)	Width (In.)	Angle of "V" (Deg.)
Autocar				
	501	60½	21/32	42
	T-H540	56½	3/8	42
Brockway				
	38B	54 11/32	21/32	42
	40B	54 11/32	21/32	42
	42BX	†58½	3/4	38
	46B	†65½	7/8	38
	48B	65½	7/8	38
(Compressor)				
	40B	36 1/2	7/8	42
	42BX	52 5/8	11/32	42
	46B, 48B	43 1/16	1	42
Chevrolet				
3000 series.	....	42½	3/8	40½
All others	....	42 7/8	11/32	32
Corbitt				
G101	Cont M6330	54¼	7/8	38
G301	Cont B6371	55 1/2	1	42
G302	Cont B6427	57½	3/4	38
G402	Cont T6427	57½	3/4	38
G601	Cont R6513	66¼	7/8	38
G602	Cont R6572	66¼	7/8	38
G603	Cont R6602	66¼	7/8	38
D202	Her DJXH	49¼	.960	50
D401	Her DWXD	65 7/8	.960	44
D402	Her DWXLD	65 7/8	.960	44
D404	Cum JBS600	35½	.406	38
D601	Her DRXC	51¾	.938	44
D601	Cum HB600	41 5/8	.438	42
D802	Cum HRB600	41 5/8	.438	42
D803	Cum NHB600	41 5/8	.438	42
D808	Cum HRB600	41 5/8	.438	42
Diamond T				
222	....	47	3/8	40
322	....	47	5/16	40
404SC	....	50	5/16	40
420	....	46	5/16	44
509C	....	53 3/8	5/16	40
509SC	....	46	11/32	40
520 (Hyd. Br.)	....	46	5/16	44
520 (Air Br.)	....	46	5/16	40
614C	....	53	5/16	40
614SC	....	46	11/32	40
620	....	See 520		

(TURN TO PAGE 168, PLEASE)

West coast operator specifies Alcoa Aluminum Forged Disc Wheels for toughest applications!

"In mountain logging, we have to use equipment that will 'take a beating'.

Wheels, in particular, have to hold up . . . so I started looking around.

Other truckers were switching to Alcoa Aluminum Forged Disc Wheels . . .

So I decided to try 'em.

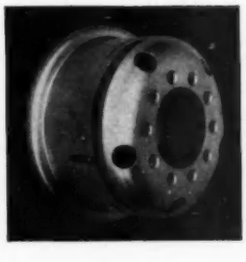
I can tell the difference already! These wheels are really tough!

What's more, they run truer, balance easier . . . and my drivers love 'em!"

Superior strength, truer running qualities and ease of balancing are only a few of the many advantages you will discover in Alcoa® Aluminum Forged Disc Wheels.

They weigh up to 50 pounds less per wheel than corresponding steel wheels—and this weight saving means less wear on chassis and tires.

Alcoa Aluminum Forged Disc Wheels dissipate heat fast—keeping tire temperature lower, allowing greater tire mileage. They resist corrosion, never need painting. In addition, tire changing is easier because there is no rust . . . rim surfaces remain smooth so tire beads loosen easily. For full information on this modern wheel, write: ALUMINUM COMPANY OF AMERICA, 1871-D Alcoa Bldg., Pittsburgh 19, Pennsylvania.



ALCOA ALUMINUM

ALUMINUM COMPANY OF AMERICA

ALCOA ON TV brings the world to your armchair with "SEE IT NOW" featuring Edward R. Murrow, Tuesday evenings on most CBS-TV stations.

Fan Belt Data

Continued from Page 166

Vehicle Make and Model	Engine Make or Model	Circumference (In.)	Width (In.)	Angle of "V" (Deg.)
Diamond T—Continued				
660	....	57	3/4	40
720	....	57	3/4	40
722	....	53	....	....
920	....	67	7/8	40
921	....	....	....	....
921R	....	....	....	....
Dodge				Pulleys
C-1-B6, C6, D6, D6 F.C., DU6, EU6		48	5/8	36
C-1-PW6		45 5/4	3/4	34-36-38
C-1-F6, F6 F. C., G6, H6, HM6, J6, JM6, K6, KMA6, FS6, HS6, JS6		51 1/4	3/4	34-36-38
C-1-G6, H8, J8, K8		63 5/8	1/2	36
C-1-R8, T8, V8, RS8		68 3/4	3/4	38
Duplex				
TH	....	54 11/16	7/8	38
TH339	....	62 11/16	7/8	38
RH	....	55	11/16	38
JH	....	53 1/16	11/16	42
KH	....	53 1/16	11/16	42
LH	....	53 1/16	11/16	42
GR6	....	55	11/16	38
GR6X4	....	56 1/16	.850	46
Federal				
1600–3000	Hyd. Brakes	51 1/16	.980	46
1600–3000	Air Brakes	56 1/16	.875	46
3400–5500	Air Brakes	57 1/16	.875	46
6000	Air Brakes	61	.750	40
6500	Air Brakes	68	.875	44
Ford				
EBR	6 cyl.	38.50	.38	38
EBS	6 cyl.	38.00	.38	38
EBT	6 cyl.	38.00	.38	38
EBV	8 cyl.	39.33	.78	38
EBZ	8 cyl.	39.33	.78	38
EAL	8 cyl.	42.16	.8125	38
EAM	8 cyl.	42.16	.8125	38
GMC				
....	248	44 1/16	11/16	40
....	270, 302	44 11/16	1/2	45
....	380	52 5/16	1	40
....	426, 503	55 1/4	1	40
....	4-71, 6-71	64 1/4	3/4	40
Linn				
....	JXE3, JXC	27	7/16	38
Marmon-Herrington (See Ford)				
Peterbilt				
....	Cum NH	471D	7/16	....
....	1091	571D	1	....
Reo				
F20	....	54	5/16	38
F21	....	54	5/16	38
F22	....	54	5/16	38
F22R	....	54	5/16	38
F22S	....	54	5/16	38
F23	....	....	....	....
F226	....	54	5/16	38
F236	....	....	....	....
Studebaker				
3R5, 3R10, 3R15		38	11/16	40-44
3R6, 3R11, 3R14, 3R16, 3R17		42	11/16	40-42
3R28, 3R38		60	5/16	38
White				
1136	....	39 3/16	3/4	42
1140	....	39 3/16	3/4	42
1144	....	39 3/16	3/4	42
White-Freightliner				
All comp.	Cum NHB	36	11/16	42
2 fan	Cum NHB	41 3/16	11/16	42
2 fan	Cum NHB(f)	50 3/4	11/16	40
Water pump	Cum NHB(f)	40 1/2	3/4	40
2 fan	Cum NHBS	50	11/16	42
Willys				
All Models	....	43.6–44.4	11/16	38-43

NEW LOW PRICE FOR "PRESTONE" ANTI-FREEZE

New price schedule for "Prestone" anti-freeze gives you this superior cooling-system protection at 20% lower cost!
See your supplier today!

NOW MORE THAN EVER YOUR BEST BUY!

- **Same high quality**
- **Same complete protection**
- **New low price**

"Prestone" anti-freeze gives you *complete* protection under all operating conditions—heavy-pulling, idling, parked. No foaming, no boil-away, no freeze-up with "Prestone" brand anti-freeze. It protects cooling systems all *ways*, all *winter!*

The terms "Prestone" and "Eveready" are registered trade-marks of Union Carbide and Carbon Corporation

NATIONAL CARBON COMPANY • A Division of Union Carbide and Carbon Corporation • *30 East 42nd Street, New York 17, N. Y.*

Provincial Regs Probable for Canadian Truckers

DESPITE a recent ruling by the British Privy Council that the Canadian federal government has the right to regulate interprovincial and international highway traffic, it now appears likely that actual control of such traffic will be handled by the provinces. If such a step is taken, the provinces will, in effect, act as agents for the federal government, enforcing federally-approved regulations.

Announcing the federal government's stand on the situation, Minister of Transport Lionel Chevrier said:

"In our view it would not be in the public interest to have a divided jurisdiction, with the provincial boards controlling the traffic within the provinces, and a federal board controlling the traffic moving between the provinces or between a province and the United States. . . ."

Conference Set-up

HE ANNOUNCED that a conference would be arranged between federal and provincial representatives to determine the regulations.

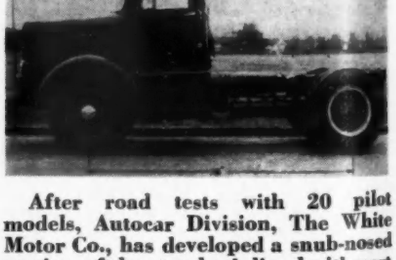
The decision has been hailed by the Canadian Trucking Associations as "wonderful news." Said CTA Executive Secretary John Magee:

"The Minister's statement . . . gives hope that control of all trucking, within and beyond provincial borders, will continue to be administered by provincial regulatory boards.

"As for truck operators who, on the strength of the Supreme Court and Privy Council judgments, have commenced trans-border operations with no authority, they appear to be in a most unenviable position as a result of the Minister's announcement. They have turned their backs on the provincial truck regulatory boards only to find that these boards may still control all trucking."

The Privy Council decision marked the end of a series of litigations which began in 1949, proceeding through provincial and federal courts. It also marked the last case in which an appeal could be carried beyond the Canadian Supreme Court.

Autocar's Shortened Tractor



After road tests with 20 pilot models, Autocar Division, The White Motor Co., has developed a snub-nosed version of the standard diesel with part of the engine projecting into the cab. The new Model No. DCU-75TN reduces the length to 106 in. Simultaneously, the wheel base is reduced to 131 in. One end of the diesel engine comes back through the cowl of the cab and is covered with an insulated metal casing, easily removable for maintenance. The new model comes equipped with diesel engines up to 200 hp.

overhauls on tough mountain run with STANOLUBE HD-M Motor Oil

REG. U. S. PAT. OFF.

• The big diesel unit shown above is one of a mountain-climbing fleet of trucks operated out of Denver, Colorado, by Armour and Company. Lubricated by STANOLUBE HD-M Motor Oil, it was recently taken in for overhaul after operating 157,000 miles over steep grades and under extreme weather and temperature conditions.

The liners had less than .005 inch wear and showed no signs of scoring. They were reinstalled for further service. There was very little bearing wear and no pitting. Rings were free. The engine, overall, was clean and in good condition.

Throughout the Midwest, in a wide variety of service, STANOLUBE HD-M has proved its ability to reduce fleet maintenance and improve operating efficiency. The Standard Oil automotive lubrication specialist serving your area will be glad to give you the facts. Phone him at your local Standard Oil office. Or, write: Standard Oil Company, 910 So. Michigan Ave., Chicago 80, Ill.

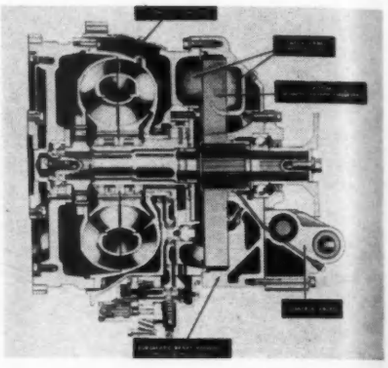
STANDARD OIL COMPANY *(Indiana)*

New Allison Torqmatic Brake Controls Down-Hill Truck Speed

A NEW braking device to provide positive control over down-hill speed of heavy-duty, off-highway trucks without wear on the conventional friction brakes has been announced by Allison Division, General Motors Corp., Indianapolis, Ind.

Known as the "Torqmatic" brake, the new system is an added package to the Allison "Torqmatic" converter now in general use with Allison "Torqmatic" transmissions in a number of heavy-duty trucks used in construction and mining industries.

It consists of three major parts: (1) a rotor assembled as an integral part of the converter output shaft, (2) stator vanes are cast into the housing which encloses the rotor, and (3) control valve.



As the truck moves down-hill, the operator opens a control valve which admits oil to the brake. The paddles of the rotor churn the oil against the stator vanes, placing a drag on the converter-transmission drive shaft. If more braking is required, more oil is admitted to the brake. Thus the operator has the truck under full control at all times and he need use the conventional friction brakes only to come to a complete stop or for "snubbing" on curves.

On the down-hill grade, the oil does the braking work and also absorbs heat generated by the braking action. The pumping action of the rotor circulates the oil to a heat exchanger where the heat is harmlessly dissipated. Source of the oil supply is the lubricating system for the converter and transmission so, after cooling, the oil is returned to the oil reservoir for re-use.

"Because it can move down-hill, under greater control and at higher speed, a truck equipped with 'Torqmatic' brake can make more trips per shift and return more income to the operator," says Allison. "In addition, maintenance and replacement of linings on the conventional brakes are greatly reduced."

The "Torqmatic" brake has been undergoing a number of field service tests at various locations since August, 1952, and recently has been put into commercial production.

Specifications

Series—400-600
Operating Oil—SAE 10 H.D.
Brake Oil Capacity (Mil-0-2104)
Maximum Oil—7½ gallons
Temperature—250 degrees F.
Weight Dry—597 lbs.
Flywheel Housing—SAE No. 1

Bendix-Eclipse

BRAKE BLOCKS AND LININGS

The Most Trusted Name in Braking ASSURES DEPENDABLE PERFORMANCE

When it comes to *braking*, the name "Bendix" is one of the most respected names in the trucking industry. That's because truck operators everywhere have long recognized the fact that Bendix brakes are the finest in their field for dependability and long, trouble-free life.

The same is true of Bendix-Eclipse* Brake Blocks and Linings. For the same engineering know-how that has made Bendix the byword in braking has made Bendix-Eclipse Brake Blocks and Linings tops for *dependable performance* in their field, too. Try them on your trucks—you'll be a steady Bendix-Eclipse booster from then on!

*TRADE-MARK

MARSHALL-ECLIPSE DIVISION OF
TROY, NEW YORK

THE NAME Bendix AVIATION CORPORATION MILLION'S TRUST

International Announces Light, Half-Ton Pickup, and Heavy, 145 hp Engine

A NEW low-cost half-ton pickup truck is being demonstrated by the International Harvester Co. The Model No. 100 has a 104 hp, 7.0 to 1 cr,

Model No. SD 220 engine. Performance characteristics include 21-ft turning radius.

The new model is presented in two 115-in. wheelbase models with 6½-ft pickup bodies: the R-100, with gross vehicle weight rating of 4200 lb, and the R-102, GW rating 4600 lb.

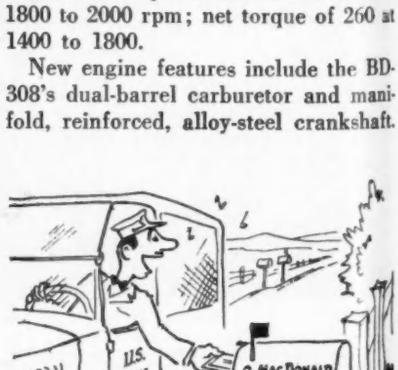
Road clearance is 7½ inches at the front axle, 8 inches at the rear axle.

New Heavy Engine

ALSO in production is a new high-torque engine, the 145-hp Black Diamond 308. The BD-308 is offered as optional equipment on International R-180-series models, the R-183 Schoolmaster model, the RF-170-series six-wheel models, and the RF-174 six-wheel Loadstar model.

The new engine, 12th in the line of International-built motor truck engines has 3 13/16-in. bore and 4½-in. stroke. Maximum torque of 273 is delivered at 1800 to 2000 rpm; net torque of 260 at 1400 to 1800.

New engine features include the BD-308's dual-barrel carburetor and manifold, reinforced, alloy-steel crankshaft.



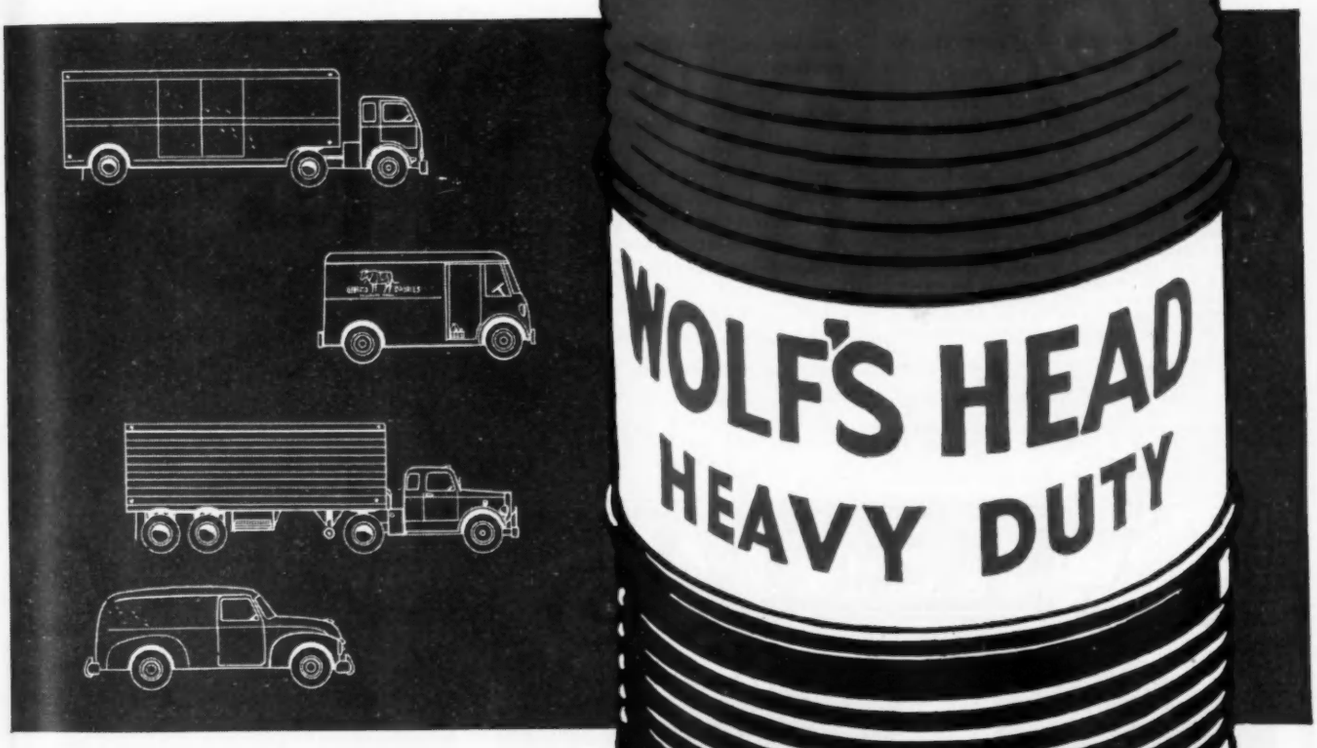
"E-I E-I O O O !"

Motor Oil...

a crude story and then some!

The basic job of *any* motor oil is to *lubricate* . . . to protect against friction and wear. The basic lubricating quality of motor oil depends upon the crude oil from which it is refined.

Nature has endowed Pennsylvania Crude with richer, better lubricating qualities than any other crude in the world. This is a known fact.



For 75 years, we have specialized in refining Pennsylvania Crude Oil. For vehicles in rugged fleet service, the ultimate product of this refining, is WOLF'S HEAD Heavy Duty Motor Oil, 100% Pure Pennsylvania. It provides superior film strength, thorough dispersancy, high detergency, and complete protection against corrosive acids, rusting and oxidation. *It cleans as it lubricates.* WOLF'S HEAD Heavy Duty Motor Oil exceeds the most exacting specifications for heavy duty oil.

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100% Pure Pennsylvania
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OIL CITY, PA.
NEW YORK OFFICE: GLENDALE 27, N. Y.

Commercial Motor Vehicle

Nomenclature

The following nomenclature has been approved by the technical board of the Society of Automotive Engineers and will appear in the 1954 Handbook

Vehicle—A vehicle is any single conveyance on wheels.

Motor Vehicle—A motor vehicle is any vehicle self-propelled or drawn by mechanical power, designed for operation on the highways or natural terrain in the transportation of property or passengers.

Motor Vehicle Chassis—A motor vehicle chassis is the basic motor vehicle, including essential structure and mechanical parts; but exclusive of all appurtenances for the accommodation of operator, property or passengers and/or appliances or equipment related to other than locomotion and control.

Commercial Motor Vehicle—A commercial motor vehicle is a motor vehicle designed primarily for the transportation of property and/or more than 10 passengers in connection with business, industry, agriculture, public service or the exploitation of natural resources.

Motor Truck—A motor truck is a single self-propelled motor vehicle carrying its load on its own wheels and primarily designed for the transportation of property.

Truck Tractor—A truck tractor is a motor vehicle designed primarily for drawing truck trailers and constructed so as to carry part of the weight and load of a semitrailer.

4 x 2—A 4 x 2 motor vehicle is a two-axled motor vehicle equipped with four wheels, two of which are driving wheels.

4 x 4—A 4 x 4 motor vehicle is a two-axled motor vehicle equipped with four wheels, all of which are driving wheels.

6 x 2—A 6 x 2 motor vehicle is a three-axled motor vehicle equipped with six wheels, two of which are driving wheels.

6 x 4—A 6 x 4 motor vehicle is a three-axled motor vehicle equipped with six wheels, four of which are driving wheels.

6 x 6—A 6 x 6 motor vehicle is a three-axled motor vehicle equipped with six wheels, all of which are driving wheels.

(TURN TO PAGE 182, PLEASE)

Excerpt from rules of SAE Technical Board.

(c) Every report approved and issued by the Board shall carry the following statement:
"All technical reports, including standards approved and practices recommended, are advisory only. Their use by anyone engaged in industry or trade is entirely voluntary. There is no agreement to adhere to any SAE Standard or SAE Recommended Practice, and no commitment to conform to or be guided by any technical report.
"In formulating and approving technical reports, the Board and its committees will not investigate or consider patents which may apply to the subject matter. Prospective users of the report are responsible for protecting themselves against liability for infringement of patents."

DRUM LIFE...MORE MILEAGE

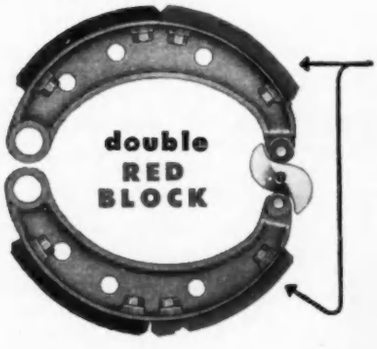
using WORLD BESTOS

RED BLOCK

For trucks and trailers operating under severe conditions, famous World Bestos RED BLOCK gives *safe stopping power* at temperatures as high as 1300 degrees F. It is not affected by glaze or water film . . . *eliminates all danger of brake fade!*

RED BLOCK actually gives drums a smooth finish that provides a perfect braking surface at all times. As a result, RED BLOCK gives safe, dependable brakes with considerably less brake pressure and less frequent application. Less severe braking reduces heat checking and *greatly prolongs drum life.* D Blocks used in the RED BLOCK Combination assure *more mileage* between relines.

Test famous RED BLOCK Combination on your toughest run! You'll be amazed by this superior brake performance.



NOW "DOUBLE RED BLOCK" COMBINATION gives EXTRA power to stop the most heavily loaded rigs in *abusive* service on or off the highway. More power to stop *plus* protection for drums and brake system! Ideal for excavators, earth movers, heavy hoists, etc.

Call your World Bestos Distributor for complete information about RED BLOCK . . . or write to WORLD BESTOS, New Castle, Indiana

WORLD BESTOS NEW CASTLE, INDIANA

Vehicle Nomenclature

Continued from Page 178

(Note: Motor vehicles designed with other combinations of driving and non-driving wheels are defined according to the same numerical scheme. Wheel and axle complement: Two wheels are considered the complement of any axle regardless of whether they may be single- or dual-tire equipped.)

Bogie—A bogie is an assembly of two rear axles with a common transverse trunnion or equivalent, one or both axles of which are driven.

Third Axle—A third axle is an additional non-driving axle placed immediately behind or in front of the rear driving axle of a truck or truck tractor.

Conventional Truck or Truck Tractor—A conventional motor truck or truck tractor is one with the driver's compartment and controls located at the rear of a hood-enclosed powerplant.

Cab Over Engine Truck or Truck Tractor—A COE (cab over engine) motor truck or truck tractor is one in which a substantial part of its engine is located under the cab.

Multi-stop Delivery Truck—A multi-stop delivery truck is one equipped with a fully enclosed body with driving compartment integral and especially designed for quick and easy ingress and egress.

Motor Bus—A motor bus is a single self-propelled motor vehicle primarily designed for the transportation of more than 10 passengers.

City Motor Bus—A city motor bus is a motor bus designed to accommodate the maximum number of passengers, both seated and standing in short ride frequent stop service and having quick-opening entrance and exit service doors.

Suburban Motor Bus—A suburban motor bus is a motor bus designed primarily for maximum passenger seated load and usually equipped with overhead parcel racks, front service door and raised seat floor with all transverse seats.

Intercity Motor Bus—An intercity motor bus is a motor bus designed for long-distance transportation of passengers with facilities for their baggage, usually both inside and outside the passenger space.

Cargo-Carrying Motor Bus — A cargo-carrying motor bus is a motor bus in which facilities are provided for cargo other than passengers' baggage.

Trolley Bus—A trolley bus is a motor bus electrically powered from overhead wires.

School Bus—A school bus is a motor bus primarily designed and/or equipped to carry school children.

Truck Trailer—A truck trailer is a commercial motor vehicle with or without auxiliary motive power designed to be drawn by a truck or truck tractor.

(a) **Single Axled Truck Trailer**—A single axled truck trailer is a truck trailer equipped with one axle and two wheels.

(b) **Two Axled Truck Trailer**—A two axled truck trailer is a truck trailer equipped with two axles and four wheels.

(c) **Three Axled Truck Trailer**—A three axled truck trailer is a truck trailer equipped with three axles and six wheels.

Semitrailer — A semitrailer is a truck trailer equipped with one or more axles and constructed so that a substantial part of its weight and load is carried by a truck tractor.

Full Trailer—A full trailer is a truck trailer constructed so that practically all of its weight and load rests upon its own wheels.

Dump Trailer—A dump trailer is a

(TURN TO PAGE 184, PLEASE)

Good buy - or goodbye INSULATION?

This unretouched photograph of a truck-trailer door (typical of the insulation throughout the entire reefer) shows what can happen to a "cheap" insulation after only several years of "service." It is an excellent reminder that **you pay for a good insulation, properly applied,** just once—but for a "cheap" insulation that fails, **you pay during the entire life of the unit.**

ULTRALITE WILL NEVER LET YOU DOWN! . . . for it's the truck-trailer insulation that won't sag, settle, pack down or disintegrate over the road and down the years. The only insulation of long, resilient glass fibers, Ultralite keeps its shape and its thermal efficiency *permanently*.

We can make such strong statements because Ultralite has been serving the trucking industry for more than 9 years — a sufficient period of time to see what an insulation will or won't do. Ultralite's ability to "take it" has been proved in "torture tests" in weathering-and-vibration laboratories. It has been proved in numerous test runs involving frozen and perishable cargoes. And then there are the actual experiences of fleet operators — like the one who recently reported that Ultralite was as good as new in a "reefer" that had traveled 700,000 miles.

This documentary proof—plus numerous timely tips on insulation and other factors that can cause cargo spoilage — is presented in a new booklet. We urge packers, shippers, fleet operators, body-builders — anyone concerned about cargo spoilage to write today for a free copy.

gb

GUSTIN-BACON MANUFACTURING CO.
230 W. 10TH ST., KANSAS CITY, MO.

New York • Chicago • Philadelphia • San Francisco • Los Angeles • Houston • Tulsa
Dallas • Detroit • St. Louis

Vehicle Nomenclature

Continued from Page 182

truck trailer provided with a body which can be tilted or otherwise manipulated to discharge its load by gravity.

Low Bed Trailer—A low bed trailer is a truck trailer constructed to provide a low loading height and designed for the transportation of extremely heavy or bulky property.

Drop Frame Trailer—A drop frame trailer is a truck trailer designed for a body for the transportation of cargo with a minimum floor height, except for a raised forward section and rear wheel housings.

Tilt Bed Trailer—A tilt bed trailer is a truck trailer equipped with one or more axles centered so as to carry the major portion of the weight of the trailer and its load with a platform type body that may be manipulated to form a loading ramp.

Tank Trailer—A tank trailer is a truck trailer designed for the transportation of fluid commodities in bulk.

Automobile Transport Trailer—An automobile transport trailer is a truck trailer primarily designed for the transportation of other vehicles.

Pole Trailer—A pole trailer is a truck trailer without auxiliary motive power, designed to be drawn by a truck or truck tractor and attached by means of a reach or pole, or by being "boomed" or otherwise secured to the drawing motor vehicle and intended for transporting long or irregularly shaped loads such as poles, logs, pipes, or structural members which are capable generally of sustaining themselves as beams between supporting connections.

Tandem—A tandem is an assembly of two axles for the support of the rear of a truck trailer.

Trailer Converter Dolly—A trailer converter dolly is a trailer chassis consisting of an auxiliary axle assembly equipped with a lower fifth wheel half, drawbar, and other necessary parts designed to convert a semi-trailer to a full trailer.

Bodies

Platform Body is one having a floor without sides or roof.

(a) **Stake Body** is a platform body with readily removable stakes which may be tied together with chains, slats or panels.

Rack Body is a body with fixed slatted sides and headboard.

(a) **A Stock Rack** is a rack body with or without roof designed primarily for transportation of livestock.

Express Body is an open box body with or without flareboards.

(a) **Pick-up Body** is a small express body.

Canopy Body is an express body with fixed or removable uprights and roof which may be integral or separate from cab.

Screen Side Body is a canopy body with fixed roof and wire screen sides.

Brewers Body is a stake or express body, usually of heavier construction.

Camel Back or Dray Body is a body with floor curving down to the rear.

Ice Body is an express body designed primarily for the transportation of water ice.

Lumber Body is a platform body with transverse rollers designed primarily for the transportation of sawed lumber.

Pulp Wood Body is a body comprised of sills with or without headboard and with provision for end uprights designed primarily for the transportation of pulp wood.

Log Body is a body comprised of sill, bolsters with or without head-

(TURN TO PAGE 186, PLEASE)

Vehicle Nomenclature

Continued from Page 184

board and with provision for side uprights and designed primarily for the transportation of logs or other loads which may be boomed.

Glaziers Body is a body consisting of an A frame structure designed primarily for the transportation of large panes of glass.

Oil Field Body is a platform type body of heavy construction equipped with a rear end roller or bullnose adapted for winch loading and designed primarily for work in the oil fields.

Riggers Body is similar to an oil field body but designed primarily for rigging work.

Dump Body is a body of any type which can be tilted or otherwise manipulated to discharge its load by gravity.

(a) **Garbage and Refuse Body** is a dump body designed primarily for the collection of garbage and refuse. It is frequently equipped with mechanical means for distributing and packing the load within the body.

Hopper Body is a body of any type which is capable of discharging its load by gravity or mechanical power through means other than tilting.

Wrecker Body is a body designed primarily for transportation of equipment for salvaging disabled vehicles and equipped with means for hoisting and towing such vehicles.

Utilities Body is a body designed primarily for the transportation of equipment and personnel for the construction and repair of public utility facilities.

Panel Body is a fully enclosed body of limited capacity and includes driver's compartment.

(a) **Sedan Delivery Body** is a small panel body primarily designed for mounting on a passenger car chassis.

(b) **A Multi-Stop Body** is a fully enclosed body with driver's compartment integral and specifically designed for quick and easy ingress and egress.

Van Body is a fully enclosed body designed primarily for the transportation of miscellaneous freight.

(a) **Insulated Van** is a van body designed primarily for transportation of commodities at controlled temperatures. It may be provided with equipment for refrigeration or heating.

(b) **Ventilated Van** is a van body with provision for ventilation of load.

(c) **Furniture Van** is a van body designed primarily for transportation of furniture or household goods. Customarily, when truck mounted, it includes an integral driver's compartment.

Open Top Box Body is a body with closed sides and ends and a movable top.

Grain Body is a low side open box body primarily designed to transport dry fluid commodities in bulk.

Ice Cream Body is an insulated body designed primarily for the transportation of ice cream and frozen food.

Bottlers Body is a body designed primarily for the transportation of cased bottled beverages on open or closed shelves, A-frames or pallets.

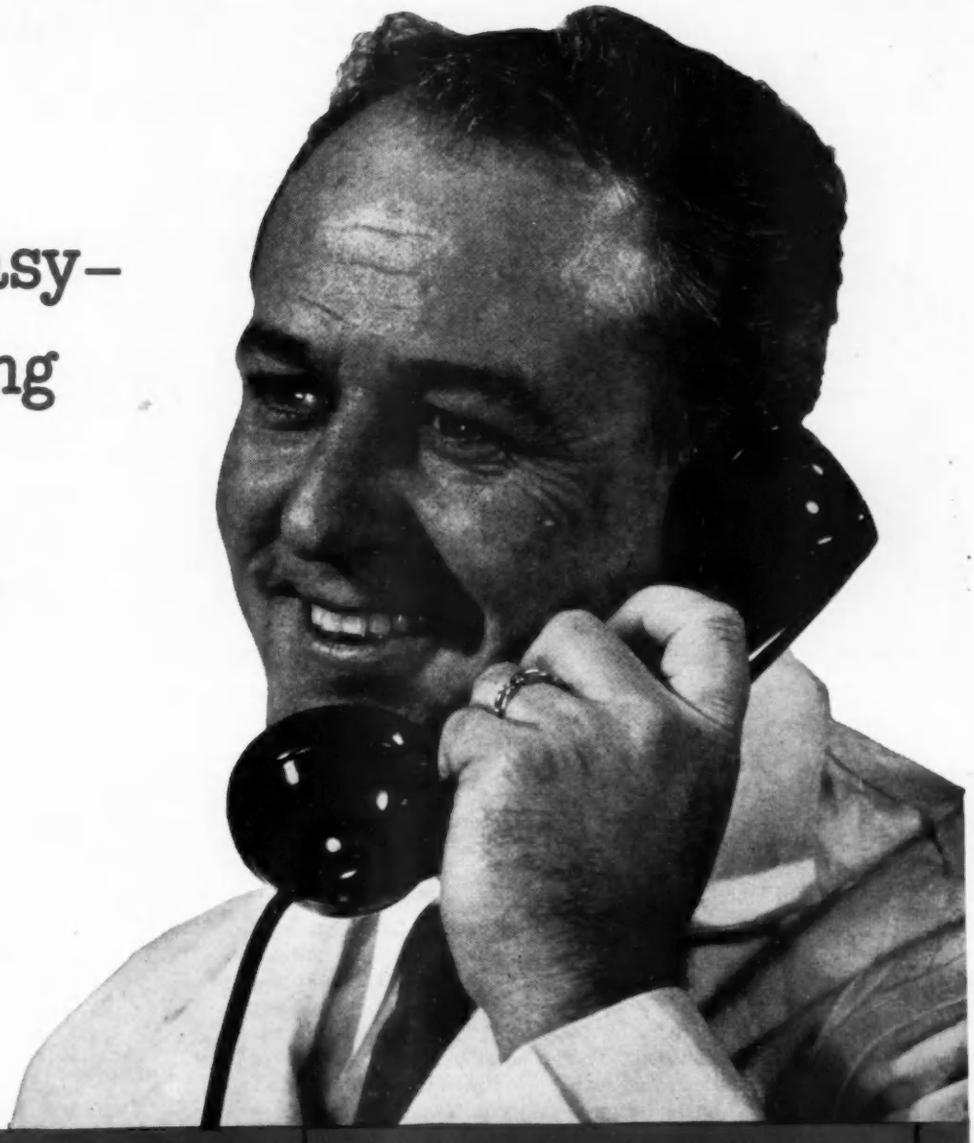
Automobile Transporter Body is a body designed primarily for the transportation of other vehicles.

Armored Car Body (not military) is an enclosed cargo body with integral driver's compartment so constructed as to protect cargo and crew from overt attack.

Tank Body is a body designed for

(TURN TO PAGE 190, PLEASE)

"That's easy—we're using that long-life Packard Cable now."



PACKARD IGNITION CABLE—*Long considered the standard of the automotive industry, Packard high-tension cable is original equipment on more cars, trucks, buses and tractors than any other cable. Packard* **FOUR-FORTY** *and Packard* **LAC-KARD** *ignition cables are designed to deliver balanced performance in every application. For dependability on the job, choose Packard!*

PACKARD LOW-TENSION CABLE—*As with Packard's two other products, Packard low-tension cable is used as original equipment on more cars, trucks, buses and tractors than cable of any other make. Packard's* **249 COMPOUND** *insulation, by every laboratory test and by the test of long, hard usage in the field, has exceptional resistance to heat, oil, chemicals and abrasion.*

Packard
REG. U.S. PAT. OFF.
TRADE MARK

Packard Electric Division
General Motors Corporation
Warren, Ohio

A GENERAL MOTORS PRODUCT GM GENERAL MOTORS UNITED SERVICE MOTORS **A UNITED MOTORS LINE**

Vehicle Nomenclature

Continued from Page 186

the transportation of fluid commodities in bulk.

(a) **Street Flusher or Sprinkler Body** is a tank body equipped with means for spraying or directing a stream of water on to the road surface.

Concrete Mixer or Agitator Body is a body designed and equipped to mix or agitate concrete in transit.

Bituminous Material Distributor is an insulated tank body provided with means for distributing hot bituminous material under pressure. It is usually equipped with means for heating the material.

Horse Van is a fully enclosed body designed primarily for the transportation of valuable horses and their appurtenances.

Bus Body is a body designed primarily for the transportation of more than ten persons.

Hall-Scott's 200 hp, 1300 lb Engine

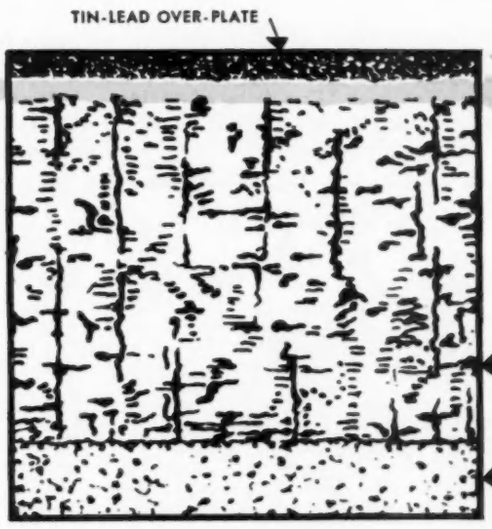
A COMPACT, light-weight engine for use in a wide range of trucks has been introduced by Hall-Scott Division, ACF-Brille Motors Co., Berkeley, Cal. The new Model No. 590 develops more than 200 hp, weighs less than 1300 lb and has a length less than 50 in.

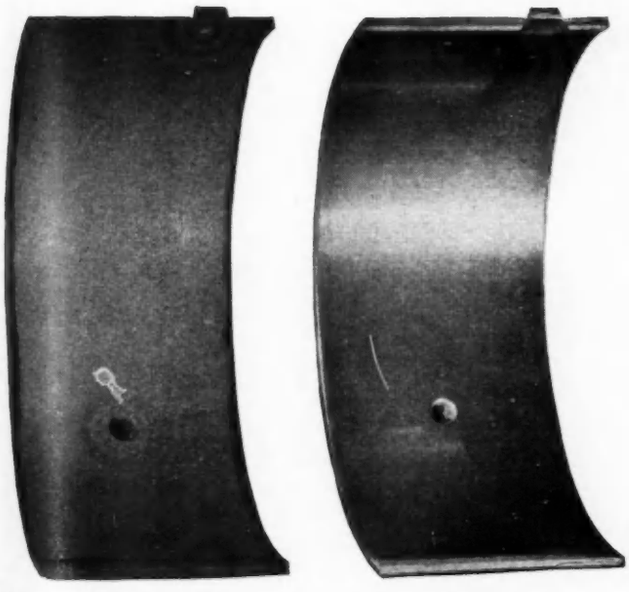
The new engine will be available for gasoline or liquid petroleum gas fuels. Option of dual down-draft carburetors for maximum power output or single up-draft carburetion for maximum economy is available.

Unique unit assembly of crankcase, cylinder block and head permits quick replacement of the block and pistons without removing the crankcase from the vehicle. Long studs in the crankcase pass completely through the cylinder block and head, holding the engine rigid but permitting rapid disassembly and ready replacement of single units.

The Model No. 590 is of square design, 5-in. bore and 5-in. stroke. It has oversize bearings and oversize oil and water pump capacity, full flow lubricating filter, cast aluminum alloy pistons and specially forged steel crankshaft. (See page 104, this issue, for complete specifications.)

THE NICKEL THAT'S WORTH DOLLARS





Thompson "CL" heavy-duty bearing — The "Ugly Duckling Bearing" that is running up sensational mileage records.

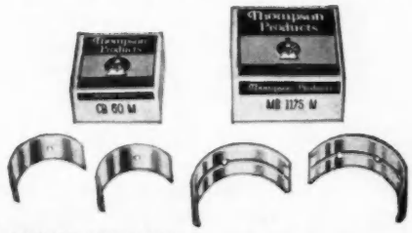
Conventional bearing

THE SECRET of the longer life of Thompson "CL" heavy-duty bearings? It's in that nickel barrier *(note the above yellow arrow)* which prevents diffusion of tin-lead plating into copper-lead base metal. This is an exclusive patented feature.

This *nickel* barrier gives the tin-lead plating a 3½-to-1 mileage advantage over babbitt in the engines you service. And that's worth DOLLARS . . . not only to the satisfied owner of the engine but also to the man who installs Thompson "CL" Heavy-duty Bearings.

In the world of motors . . . car, truck, bus and tractor . . . Thompson is the leader, not only in the Original Equipment field, but also in "Original Equipment" Replacement parts.

Your Thompson Jobber's catalogs contain hundreds of "CL" bearing listings. Get "CL" Bearings from your Jobber for the heavy-duty engines you service.



THOMPSON ENGINE BEARINGS for replacement use are exact duplicates of those used by car, truck, bus and tractor builders for Original Equipment. These bearings include: Thin-layer (tin or lead base) bimetal; Conventional babbitt (tin or lead base) bimetal, steel back; Copper-lead bimetal, steel back; "CL" heavy-duty tri-metal (tin-lead, nickel and copper-lead base) steel back.

See your

Thompson Products Jobber

DOMESTIC SERVICE SALES

2209 Ashland Rd. • Cleveland 3, Ohio

Selected Fleet Films for Training

Continued from Page 144

Slow Motion Study of Normal Combustion, Preignition and Knock in a Spark Ignition Engine—33 min—Silent, advanced technical film on gasoline engine combustion. Free loan—47.

A Study of Combustion in a Spark Ignition Engine—17 min—Shorter version of the above film. Also silent. Free loan—47.

Where Mileage Begins—19 min—Animated film describing gasoline engine operation, what happens when gears are shifted. Functions of parts are explained as an engine is assembled. Free loan—30.

Diesel Engines

The ABC of the Diesel Engine—20 min—Animated, color film on diesel engine fundamentals. Follow-up film to "The ABC of Internal Combustion." Free loan—30.

Diesel Story—20 min—Thorough explanation of the principle of the four-stroke diesel engine. Free loan—62.

Diesel . . . The Modern Power—21 min—Both 4 and 2-cycle engines are discussed. Engine is assembled and function of each part explained. Free loan—30, 72.

International Diesel Power—20 min—Explains features and shows operation of the International diesel engine. Free loan—35.

Slow Motion Study of Fuel Injection and Combustion in a Diesel Engine—33 min—Silent, advanced technical film on diesel engine fuel injection and combustion. Free loan—47.

Gas Turbine Engines

Boeing Model 502 Gas Turbine Engine—17 min—Describes Boeing's gas turbine engine. Also covers truck operation with the engine. Free loan—13.

Tornado in a Box—28 min—Shows construction, principle, advantages and limitations of larger gas turbine engines. Free loan—4.

Ignition, Electrical System

Ignition Engineered—35 min—Describes function and operation of the ignition system. Free loan—22.

Ignition and Spark Plugs—19 min—Illustrates cleaning and testing of spark plugs. Shows relationship of spark plug to ignition system. Free loan—16.

Johnnie Plug Check—30 min—Color film on procedure for checking spark plugs. Free loan—22.

Story of a Spark Plug—33 min—Shows how to install spark plugs and describes causes of faulty performance. Also includes spark plug manufacture. Free loan—16, 72.

Story of the Storage Battery—21 min—Describes principle, operation and use of the storage battery. Also covers battery manufacture. Free loan—72.

Brakes

Air Brakes, Operation and Maintenance, Part 1—24 min—Covers truck and tractor air brakes. Free loan—12.

Air Brakes, Operation and Maintenance, Part 2—21 min—Covers trailer air brakes. Free loan—12.

(TURN TO PAGE 194, PLEASE)

Selected Fleet Films

Continued from Page 192

Safest Thing on Wheels—50 min—Shows how to reline and adjust all popular types of automobile brakes and how to service hydraulic brake systems. Rent—70.

Short Stops—10 min—Describes operation of automobile hydraulic brakes and how to use them effectively. Free loan—25.

Bearings

Longer Engine Bearing Life—26 min—Color film describing engine, bearing maintenance. Free loan—26.

Service Procedure for Ball Bearings — 20 min — Instructional film showing how to remove, service and install ball bearings in vehicles. Free loan—30.

Lubrication

Basic Principles of Lubrication—25 min—Explains basic theory and function of lubrication in the engine using U. S. Army trucks as examples. Shows how it reduces friction, cools moving parts, keeps power in the cylinder and prevents contamination and deterioration. Free loan—30.

It's Mighty Cheap Insurance—30 min—Color film on the reasons for and the advantages of regular oil change. Shows how engine is lubricated. Free loan—69.

Lubrication — 30 min — Describes theory of friction and application of lubricants in a vehicle. Free loan—72.

Oil Films in Action—18 min—Technical film in color for engineers showing effect of oil film in bearing life. Free loan—30.

The Why of Automobile Lubrication—24 min—Color film on why lubrication is necessary. Free loan—72.

General Maintenance

The ABC of Hand Tools, Part 1—18 min—Animated, color film shows how to handle such tools as hammers, screwdrivers, pliers and wrenches. Free loan—30.

The ABC of Hand Tools, Part 2—15 min—Animated, color film shows how to handle such tools as files, saws, chisels, planes, drills and punches. Free loan—30.

School Bus Operation, Part 1, Bus Care and Maintenance—13 min—Outlines points to be checked in daily and weekly maintenance of school buses. Free loan—25. Rent—33, 39, 50, 68.

Curve .Control—8 min—Explains operation of various types of steering mechanisms. Rent—38.

For Safety's Sake—15 min—Demonstrates safe use of power-driven, hand tools. Rent—53, 61.

FWD Story—25 min—Color film showing principle and operation of Four Wheel Drive trucks. Free loan—27.

A Good Valve Job Pays—23 min—Describes complete procedure for doing a valve job. Free loan—24.

Grinding Cutter Bits—20 min—Color film shows correct way to grind tools for different lathe operations. Free loan—63.

The Grinding Wheel, Its Care and Use—17 min—Color film shows care and precautions necessary for efficient use of grinding wheels. Gives correct dressing procedures. Free loan—54.

Grinding Wheel Safety—20 min—Color film covers principal causes of grinding wheel breakage. Discusses selection of grinding wheels. Free loan—54.

Making the Most of the Spray Painting Method—45 min—Illustrates the four basic principles of spray paint-

(TURN TO PAGE 197, PLEASE)

Selected Fleet Films

Continued from Page 194

ing—proper equipment, control factors for high quality results, painting technique and equipment care, cleaning and maintenance. Free loan—19.

The Metalworking Lathe—20 min—Color film on basic metalworking lathe operation. Function of each part is described. Free loan—63.

Plain Turning—20 min—Color film illustrates all operations necessary in machining a shaft. Free loan—63.

Professor Otto Trouble—16 min—Animated film on automobile cooling system troubles and proper maintenance practices. Free loan—51.

Pulling for Profits—20 min—Demonstrates basic fundamentals of the NoSPIN differential. Shows how it operates. Free loan—18.

School Bus Safety—18 min—Discusses maintenance and operational procedures for school buses. Includes material on transporting school children safely. Rent—32, 74.

That's the Torque Converter—22 min—Detailed showing of principles of torque conversion. Free loan—4.

The Truck that Tips Its Cab to Service—30 min—Describes how the White tilt cab operates. Free loan—76.

Use and Care of Hacksaws—18 min—Shows proper use and care of hacksaws, and accident hazards to be avoided in their use. Free loan—60. Rent—53.

Use and Care of Hammers—11 min—Shows proper use and care of hammers, and accident hazards to be avoided in their use. Free loan—60. Rent—53.

Use and Care of Chisels—12 min—Shows proper use and care of chisels, and accident hazards to be avoided in their use. Free loan—60. Rent—53.

Use and Care of Pliers and Screwdrivers—17 min—Shows proper use and care of pliers and screwdrivers, and accident hazards to be avoided in their use. Free loan—60. Rent—53.

Use and Care of Punches, Drifts and Bars—14 min—Shows proper use and care of punches, drifts and bars, and accident hazards to be avoided in their use. Free loan—60. Rent—53.

Use and Care of Wrenches—20 min—Shows proper use and care of wrenches, and accident hazards to be avoided in their use. Free loan—60. Rent—53.

Welding

Advanced Welding Techniques—10 min—Shows selection of electrodes for AC welding. Demonstrates practical aspects of welding techniques. Free loan—75.

Advantages of AC Welding—19 min—Easy to understand presentations in color of principles and applications of AC welding of iron and steel. Free loan—75.

Arc Welding Stainless Steel—20 min—Explains technique for electric arc welding of stainless steel. Free loan—2.

The Inside of Arc Welding—6 parts, each 10 min—Film No. AS-2481 covers arc welding fundamentals; the other five show fillet and groove welding in flat position—Film No. AS-2482, horizontal position—Film No. AS-2483, vertical position—Film No. AS-2485, overhead position—Film No. AS-2486, and Film No. AS-2484 describes use of larger electrodes. In color. Free loan—29.

Prevention and Control of Distortion in Arc Welding—20 min—Explains how to overcome metal distor-

(TURN TO PAGE 198, PLEASE)

Selected Fleet Films

Continued from Page 197

tion in arc welding. Free loan—42.

Resistance Welding of Stainless Steel—22 min—Color film describes spot, seam, projection and butt resistance welding of stainless steel. Free loan—2.

Safety for Welders—7 min—Illustrates protective clothing and equipment for welders to prevent eye injuries and metal fume poisoning. Rent—37, 57.

A Story of Arc Welding—24 min—Color film on various uses, techniques and theory of arc welding. Many automotive scenes are included. Free loan—72.

This Is Resistance Welding—25 min—Color film describing resistance welding techniques. Ask for Film No. AS-2583. Free loan—29.

Welding, the Safe Way—18 min—Training film for new welders illustrates safe working conditions for most welding operations. Rent—53.

Handling Aluminum

Arc Welding Aluminum—10 min—Explains techniques for metal, carbon and hydrogen arc welding of aluminum. Free loan—5, 72.

How to Form Aluminum, General Sheet Metal Practice—20 min—Bending, hammering, beading, flanging, edging and otherwise forming sheet aluminum, both manually and mechanically, is covered in this film dealing largely with industrial procedures. Free loan—5.

How to Machine Aluminum—32 min—Outlines practices employed in machining aluminum with hand and machine tools. Free loan—5, 72.

How to Rivet Aluminum—27 min—Explains procedures and techniques in riveting aluminum. Selection of various types of rivets is also included. Free loan—72.

How to Weld Aluminum, Resistance Welding—12 min—Explains technique of resistance welding aluminum. Free loan—5, 72.

How to Weld Aluminum, Torch Welding—17 min—Explains technique of torch welding aluminum. Free loan—5.

New Horizons in Aluminum Brazing—22 min—Color film illustrates advantages of and how to join aluminum parts by brazing. Free loan—5.

SAFETY FILMS

THIS list of safety films will provide effective instruction for your drivers, mechanics and other employees in (1) how to prevent traffic and shop accidents, and (2) in what to do when an accident happens. It is a well known fact that preventing accidents means reduced insurance costs, less employee and vehicle time lost, too. These films will help you make these savings at low cost. The films in the list have been especially selected for their direct application to bus and truck fleet employee training. Additional information on more general traffic safety films is available from the editors. Films in this section are arranged as follows:

1. Driver Training, General
2. Driver Training, Bus
3. Driver Training, Truck
4. Fire Prevention and Control
5. First Aid
6. Shop and Dock Safety

(TURN TO PAGE 200, PLEASE)

Eaton SODIUM COOLED VALVES save money for Truck Owners

Eaton Sodium Cooled Valves operate at considerably lower temperatures than do conventional valves and, therefore, last several times longer.

In general, maintenance of Eaton Sodium Cooled Valves in heavy duty truck engines is scheduled only at time of major engine overhaul. No in-between trips to the shop are necessary for servicing the valves. Engine output is maintained at high levels over long mileages. In many millions of miles of heavy-duty operation, Eaton Sodium Cooled truck valves have proved their ability to keep trucks on the road and out of the shop.

EATON MANUFACTURING COMPANY
CLEVELAND, OHIO
VALVE DIVISION: 9771 FRENCH ROAD • DETROIT 13, MICHIGAN

PRODUCTS: Sodium Cooled, Poppet, and Free Valves • Tappets • Hydraulic Valve Lifters • Valve Seat Inserts • Jet Engine Parts • Rotor Pumps • Motor Truck Axles • Permanent Mold Gray Iron Castings • Heater-Defroster Units • Snap Rings Springtites • Spring Washers • Cold Drawn Steel • Stampings • Leaf and Coil Springs • Dynamatic Drives, Brakes, Dynamometers

Selected Fleet Films

Continued from Page 198

Driver Training, General

The Champ Becomes Deaf and Blind—10 min—Color film for professional drivers shows why the ability to concentrate on the job of driving, shutting out all distractions, is a big part of professional driving skill. Rent—53.

A Day in Court—29 min—Story of a day in traffic court. Shows how the accidents that come up for hearing happened and what could have been done ot prevent them. Free loan—45.

Let's Count the Cost—16 min—Shows how much accidents cost, illustrating the effect of rising prices and wages on accident claims and how careless driving has increased the number of these claims. Free loan—1.

Live and Let Live—10 min—Color film using three-dimensional, scale-model, animation to demonstrate 10 leading causes of driving accidents. Free loan—1.

Night and Bad Weather Driving—11 min—Basic film on safe driving at night and in bad weather. Free loan—25.

Ninety Day Flash—10 min—Color film shows how small driving errors made by professional drivers lead to faulty driving habits and inevitably into accidents. Rent—53.

Problems of City Driving—11 min—Basic film on recognition of hazards in driving, in heavy traffic. Free loan—25, 73.

Safety Is No Accident—13 min—Color film illustrating the theme that highways would be safer if all drivers were like professional truck drivers. Describes the automobile cameras for highway observation used by Markel Service, Inc. Free loan—44.

Short Stops—10 min—Describes operation of automobile hydraulic brakes and how to use them effectively. Free loan—25.

Skill Is Your Business—10 min—Color film shows what it takes to maintain professional driving skill day after day, year after year and always have it on tap to meet those unexpected situations which often involve unskilled drivers in accidents. Rent—53.

Smooth Operation—16 min—Describes the hazards of the distractions and delays of city driving. Shows how when truck drivers fight traffic, they make driving tougher on themselves. Rent—53.

Speed and Reflexes—11 min—Dem-

(TURN TO PAGE 204, PLEASE)

Selected Fleet Films

Continued from Page 200

onstrates effect of speed in relation to physical laws of motion, human reflexes and reaction time. Affects of fatigue on the driver are shown. Free loan—73. Rent—58.

Take a Look at the Odds—10 min—Color film tells why the right attitude towards safety by professional drivers is the best insurance against accidents. Shows how the odds are always in favor of the driver who plays it safe. Rent—53.

You Bet Your Life—10 min—Driver training film on road signs, road markings and hand signals. Rent—58.

Watch Your Handicap—10 min—Color film designed to show professional drivers handicaps to safe driving resulting from lack of sleep, improper food habits, irregular health habits. Rent—53.

With Care—11 min—Shows professional, safe truck driving practices. Rent—20, 40.

Driver Training, Bus

Bus Driver—10 min—Description of the hazards a professional bus driver meets on his daily run. A guide to safe, professional bus driving. Rent—67, 68.

Gentlemen of the Highway—10 min—Illustrates qualifications, training, equipment and everyday routine of the intercity bus driver in attaining safe operation. Free loan—1.

Hustle and Bustle—10 min—Shows safe bus operation illustrating checking the vehicle, stopping, starting, following distances, safe speeds, turns, pedestrians, courtesy and reporting of hazards. Free loan—73.

It's a Big Job—25 min—Basic training film for urban transit bus operators. Rent—53.

The Operator and His Job—13 min—Basic film on the job of the urban transit bus operator. Free loan—7. Rent—33, 68.

The Operator and His Passengers—19 min—Demonstrates relationship of the urban transit bus operator and his passengers. Free loan—7.

The Operator and Safety—19 min—Shows techniques of safe operation for urban transit bus operators. Free loan—7. Rent—40, 53, 68.

Priceless Cargo—20 min—Demonstrates school bus accident prevention and proper planning of school bus routes. Free loan—66.

School Bus Operation, Part 2, Driving Hazards—Safety—14 min—Shows safe driving habits and practices in school bus operation. Free loan—25. Rent—33, 39, 40, 55, 68.

School Bus Safety—18 min—Discusses safety factors involved in transporting school children. Includes maintenance and operational procedures. Rent—32, 74.

Driver Training, Truck

Caution at the Crossroads—12 min—Instructional film for truck drivers on avoiding intersectional accidents. Free loan—25, 31, 36, 41, 43, 48, 73. Rent—53.

Champions at the Wheel—17 min—Color film shows safe driving practices for semi-trailer drivers. Free loan—1.

Danger in Reverse—18 min—Basic film on backing commercial motor vehicles. Free loan—25, 31, 36, 41, 43, 48, 73. Rent—53.

Dark Daze—10 min—Illustrates effect of proper and improper eating and sleeping habits on night drivers of commercial vehicles. Free loan—31, 41, 48, 73. Rent—53.

Hell Wouldn't Have Him—30 min—Film for truck drivers showing re-

(TURN TO PAGE 206, PLEASE)

Your N·A·P·A Jobber is a good man to know!

the genuine quality of these nationally advertised brands is doubly assured by the makers' integrity and the NAPA Seal.

For genuine quality and coverage, the group of lines your NAPA Jobber stocks cannot be surpassed. Many of these NAPA lines are widely used as original equipment. In every case, the lines which bear the NAPA Seal are recognized by automotive engineers as meeting the highest standards of quality. And combined with this uniform and dependable quality, your NAPA Jobber is equipped to offer you extraordinary *service.* He can replenish his stock overnight—or obtain the seldom-needed parts no jobber can afford to stock, in record time . . . from his nearby NAPA Warehouse. There's no waiting "for shipment from the factory."

This unbeatable NAPA combination of quality, coverage and service is yours in any purchase you make from your NAPA Jobber. You can buy with confidence, because he has at his command all the facilities, resources and experience of a great national organization devoted to the purpose of serving your needs well. Wouldn't it pay you to concentrate *your* purchases of parts and supplies with *him*?

National Automotive Parts Association, Detroit, in behalf of the thousands of independent

N·A·P·A JOBBERS

who supply fleet operators and the automotive repair trade from coast-to-coast with these*—and many other—nationally advertised brands of quality automotive parts and supplies.

*Famous names in Automotive products distributed by NAPA

Selected Fleet Films

Continued from Page 204

sults of carelessness on highways. Free loan—8, 14, 73.

Knights on the Highway—10 min—Commercial driver training film on night driving safety. Rent—20, 32, 37, 40, 73.

Look What You're Missing—27 min—Color film illustrating driving tip-offs used by truck drivers to prevent accidents. Basic film on defensive driving. Free loan—41.

Looking for Trouble—10 min—Commercial driving training film on making a mechanical check on a truck to keep it safe and serviceable. Free loan—31, 41, 43, 48, 73. Rent—53.

Mind Your Manners—10 min—Brief lessons in advantages of driver courtesy for commercial vehicle drivers. Free loan—31, 41, 48, 73. Rent—53.

Pipeline on Wheels—26 min—Color film describing safe operation and construction of tank trucks. Free loan—21.

A Professional Portrait—22 min—Shows how the professional truck driver operates as compared with the amateur. Free loan—8, 30, 52, 73.

Split-Second Survival—10 min—Shows how a professional driver can prevent an imminent accident by reacting properly to the situation. Shows truck drivers what to do in such emergencies. Free loan—31, 41, 48, 73. Rent—53.

Tailgating—11 min—Describes danger of following too closely on the highway. Free loan—8.

They Drive in Safety—25 min—Color film on how to attain accident-free truck driving. Free distribution limited to 11 western states. Free loan—46. Rent—53.

Too Close for Comfort—8 min—Shows how tailgating causes accidents in truck driving. Free loan—25, 31, 36, 41, 43, 48, 73. Rent—53.

Too Fast for Conditions—9 min—Shows why legal speed limits are often too fast for safety in truck driving. Free loan—25, 31, 36, 41, 43, 48, 73. Rent—53.

The Truck and the Driver—10 min—Illustrates professional, safe truck driving practices. Discusses truck maintenance. Rent—53.

You're Driving 90 Horses—26 min—Color film demonstrating defensive driving techniques for light truck operators. Free loan—11.

What Happened?—10 min—Commercial driver training film on how to gather facts at the scene of an accident. Free loan—31, 41, 43, 48, 73. Rent—53.

Wrong Side—Suicide—10 min—Commercial driver training film on the hazards of crossing the centerline. Free loan—25, 31, 41, 43, 48, 73. Rent—53.

Fire Prevention and Control

Cause for Alarm—Shows how to control fires, how to turn in an alarm, how to meet an emergency situation and how various types of extinguishers are used. Rent—53.

Control of Flammable Liquids—18 min—Manufacturer's film showing methods of handling, storing and conserving flammable liquids. Free loan—59.

Fight That Fire—10 min—Color film shows techniques of fighting small fires with common types of hand extinguishers including soda ash, carbon tetrachloride, foam and pump. Free loan—23, 50.

Fire and How to Fight It—23 min—Color film shows how different classes of fires start, various types of portable extinguishers, and how to use them. Free loan—50.

(TURN TO PAGE 208, PLEASE)

Selected Fleet Films

Continued from Page 206

Propane Fires — 25 min — Silent, colorfilm showing large scale tests on fires involving propane, gasoline and benzol under high pressure. Free loan —9.

Stop Fires—Save Jobs—18 min—Tells how fires start, how to report them and how to recognize fire hazards. Free loan—50.

Stop the Fire Thief—13 min—Illustrates recognition of fire hazards in handling and storage of flammable liquids, electrical equipment, welding, open heating equipment, smoking, and dirt and trash. Rent—53.

The Torch—10 min—Color, cartoon film on how carelessness causes fires. Free loan—50.

First Aid

First Steps in First Aid—30 min—Basic training film for beginners in first aid. Similar to "Help Wanted." Free loan—72.

Handle With Care—14 min—Color film demonstrating basic techniques of first aid. Free loan—1.

Help Wanted—30 min—Basic training film for beginners in first aid. Similar to "First Steps in First Aid." Free loan—72.

Minutes That Count, Part 1—30 min—Color film for training in first aid techniques. Covers arterial bleeding and dressing of cuts and open wounds. Free loan—65.

Minutes That Count—Part 2—30 min—Color film for training in first aid techniques. Covers dislocations, fractures, infections and transportation of wounded. Free loan—65.

Seconds Count—8 min—Describes Nielsen method of artificial respiration which has been adopted by the American Red Cross. Includes instruction on giving stimulants and protecting from shock. Free loan—1.

Shop and Dock Safety

The ABC of Hand Tools, Part 1—18 min—Animated, color film shows safe handling of such tools as hammers, screwdrivers, pliers and wrenches. Free loan—30.

The ABC of Hand Tools, Part 2—15 min—Animated, color film shows safe handling of such tools as files, saws, chisels, planes, drills and punches. Free loan—30.

For Safety's Sake—15 min—Demonstrates safe use of power driven, hand tools. Rent—53, 61.

Freight Handling Safety—11 min—Shows freight loading hazards, how to handle dock plates, how to lift, carry and pile, and how to use hand trucks. Free loan—73. Rent—53.

The Grinding Wheel, Its Care and Use—17 min—Color film shows safety in use and operation of grinding wheels. Free loan—54.

Grinding Wheel Safety—20 min—Color film covers grinding wheel safety, principal causes of wheel breakage and need for proper guards. Free loan—54.

Partners in Production—17 min—Color film on industrial and shop safety. Shows why safety is needed, methods of safe lifting and need for keeping tools in good condition. Free loan—1.

Safety for Welders—7 min—Illustrates protective clothing and equipment for welders to prevent eye injuries and metal fume poisoning. Free loan—73. Rent—37, 57.

Safety Saves—30 min—Illustrates the "do's and don'ts" of safe driving fork lifts, tow tractors and hand trucks. Also shows safe handling of cargo. Free loan—17.

(TURN TO PAGE 210, PLEASE)

More Up Grade Traction

CHOOSE 4-WHEEL DRIVE

OSKOSH TRACTORS

...FOR MINE, QUARRY AND OFF-HIGHWAY HAULING

CUT HAULING COSTS . . .

Divide tire wear and driving stress over

2 DRIVING AXLES

Oshkosh's tremendous power, plus two driving axles, provide sure-footed, all-wheel traction to keep loads moving despite grades made slippery by rain or snow.

All-wheel drive, with patented automatic locking center differential, eliminates tire-scuffing on turns.

With all-wheel drive, hauling stress and tire wear is distributed over two driving axles—cuts tire replacement costs.

With "power steer" and spring-suspended driver's seat, high operator efficiency is maintained by Oshkosh's ease of handling under all driving conditions.

- Models available from 22,000 to 90,000 lbs. G.V.W.
- Available with gasoline, diesel or LP engines.
- Service stations located at convenient points throughout the United States and Canada.
- For full details, write for Bulletin No. 354.

OSHKOSH

4 and 6 WHEEL DRIVE TRUCKS

OSHKOSH MOTOR TRUCK INC.

OSHKOSH WISCONSIN

Selected Fleet Films

Continued from Page 208

Use and Care of Chisels—12 min—Shows accident hazards to be avoided with proper use and care of chisels. Free loan—60. Rent—53.

Use and Care of Hacksaws—18 min—Shows accident hazards to be avoided with proper use and care of hacksaws. Free loan—60. Rent—53.

Use and Care of Hammers—11 min—Shows accident hazards to be avoided with proper use and care of hammers. Free loan—60. Rent—53.

Use and Care of Pliers and Screwdrivers—17 min—Shows accident hazards to be avoided with proper use and care of pliers and screwdrivers. Free loan—60. Rent—53.

Use and Care of Punches, Drifts and Bars—14 min—Shows accident hazards to be avoided with proper use and care of punches, drifts and bars. Free loan—60. Rent—53.

Use and Care of Wrenches—20 min—Shows accident hazards to be avoided with proper use and care of wrenches. Free loan—60. Rent—53.

Welding, the Safe Way—18 min—Training film for new welders illustrates safe working conditions for most welding operations. Rent—53.

PUBLIC RELATIONS FILMS

BETTER public relations for the highway transportation industry and more adequate highways—two top subjects for bus and truck fleet operators—are covered in this film list. It is designed to help you take advantage of every opportunity to show the public the importance of bus and truck transportation and the value of better roads in today's economy. Show them at your local Rotary, Kiwanis, Lions, etc.—benefit your community and yourself. Films in this section are divided as follows:

1. Highway Transportation
2. Adequate Roads

Highway Transportation

Gentlemen of the Highway—10 min—Describes the training, the qualifications, the vehicles and the daily routine of a bus driver. Free loan—1.

Haulaways West—25 min—Describes truck transportation and safe truck driving in the delivery of four

(TURN TO PAGE 212, PLEASE)

Only COLE-HERSEE *offers a* VOLTAGE CONTROL UNIT

THAT *DOES NOT* DIMINISH BRILLIANCE OF STOP & TAIL LIGHTS WHEN 12 VOLT TRACTOR IS HOOKED UP TO A 12 VOLT TRAILER

NO. 30008 VOLTAGE CONTROL UNIT reduces 12 volt tractor system to 6 volt trailer operation with manual, variable control for required number of marker lights.

For a 12 volt system, plug is inserted directly in 12 volt socket — no adjustment of pointer knob is necessary. Stop lamps and tail lamps do not dim when 12 volt tractor is hooked up to a 12 volt trailer.

Assures positive electrical contact, minimum loss — maximum candle power in all lights on trailers.

This is not a rheostat — it's a multiple, heavy duty fixed contact switch that controls known units of resistance.

Theft-proof & tamper-proof construction. Extra heavy duty tabs with ½" hole to accommodate padlock.

SOCKETS TAKE STANDARD 6 POLE PLUG

Manufactured by Cole-Hersee Company, the leading manufacturer of truck and trailer electrical equipment.
This unit embodies the technical and quality characteristics for which Cole-Hersee is famous.

THE INSIDE STORY OF THE COLE-HERSEE VOLTAGE CONTROL UNIT

Famous COLE-HERSEE QUALITY CONSTRUCTION THROUGHOUT

- Wiring & connectors are insulated from resistance units by a high heat-resistant glass insulating material.
- Silver inlaid contacts and contactors.
- Special construction assures heat dissipation.
- Rugged mechanical and electrical design.
- Genuine Nichrome wire resistors encased in ceramic.
- Resistors are welded to terminals.

Height – 8" — Width – 6¼" — Depth – 2¼"
Cable Length – Four Feet
Weight – 5 lb. Including Cable

COLE HERSEE COMPANY 20 OLD COLONY AVENUE BOSTON 27, MASS., U.S.A.

Selected Fleet Films

Continued from Page 210

new automobiles from a Detroit plant to a new car dealer in Los Angeles, Cal. Free loan—49.

Horizons Unlimited — 17 min — graphically shows the importance of truck transportation in our everyday living. Includes scenes of many different types of trucks. Free loan—8, 25, 30, 52, 76.

Look What You're Missing—27 min —Color film illustrating driving tip-offs used by truck drivers to prevent accidents. Basic film on defensive driving. Free loan—41.

The McGurk Way—26 min—Presents history of highway transportation from colonial days to the present. An interesting outline of state legislation affecting highway transportation is included. Free loan—28.

Oil—The Invisible Traveler—20 min —Shows how oil and oil products are transported from the well to the consumer, including many illustrations of tank trucks at work. Free loan—62.

Pipeline on Wheels—26 min—Shows how the modern tank truck is a strong, carefully engineered vehicle for safe transportation of gasoline and other liquids. Free loan—21.

A Professional Portrait—22 min—Shows how professional truck drivers "keep 'em rolling" safely, skillfully, considerately, and how their work brings us the things we need and use. Free loan—8, 30, 52.

The Road Ahead—15 min—Stresses the importance of truck transportation with many excellent scenes of trucks at work. Free loan—8, 76.

Safety Is No Accident—13 min—Color film illustrating the theme that highways would be safer if all drivers were like professional truck drivers. Describes the automobile cameras for highway observation used by Markel Service, Inc. Free loan—44.

Singing Wheels—23 min—Portrays the part trucks play in building, distributing, and serving. A particularly dramatic sequence shows what would happen if trucks disappeared. Free loan—8.

Teamwork in Transit—21 min—Tells the story of the trucking industry's importance to our everyday life and traces the history of highway transportation. It emphasizes the important part played by mechanics and drivers. Free loan—12.

They Drive in Safety—25 min—Color film on how to attain accident-free truck driving. Free distribution limited to 11 western states. Free loan—46. Rent—53.

To New Horizons—17 min—Depicts the development of transportation in the post war era. Free loan—76.

Trucks That Serve Our City—14 min—Shows how trucks serve the modern city in respect to communication, food supply, sanitation, construction and as the necessary link between railroads and the consumers. Rent—71.

Wheels of Progress—24 min—Color film explaining how long haul motor freight operates including its history, background and highway safety. Shows how truck transportation serves the nation. Free loan—56.

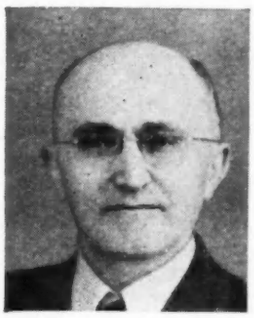
With Care—11 min—A professional truck driver tells a private motorist about how fleet operators promote safety on the highway. Includes illustrations of safe truck driving. Free loan—73. Rent—20, 40.

Adequate Roads

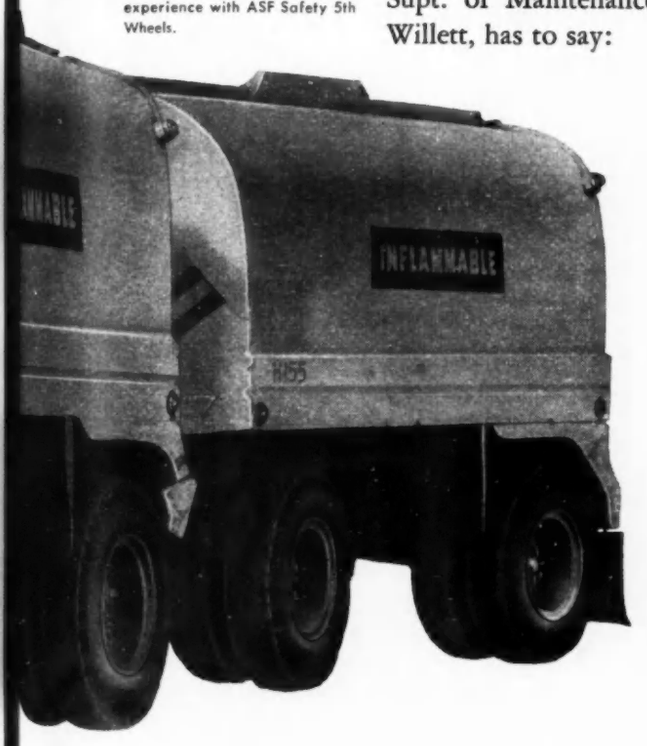
Better and Safer Highways—7 min —Promotes public understanding of Project: Adequate Roads—Explains

(TURN TO PAGE 216, PLEASE)

When one look at a 5th wheel shows you that it's obviously built for the toughest service, the natural reaction during a trial is to "throw the book" at it. That's how Willett Company—one of the country's leading local truckers—found that *they* get the performance out of the ASF Safety 5th Wheel *we* build into it. Read what Phil Young, Supt. of Maintenance at Willett, has to say:



Phil Young, Supt. of Maintenance for Willett, describes his firsthand experience with ASF Safety 5th Wheels.



"We knew a good 5th wheel when we saw one, but to make sure, we gave it our toughest test. For a year, the ASF 5th Wheel was used for hauling a double-bottom, 8000-gal. tanker in local service. It certainly came through, without costing us a nickel for maintenance other than routine greasing.

"The rubber buffer on the jaw solved our 5th wheel problems. ASF 5th Wheels are now standard equipment on all Willett tractors."

"*The rubber buffer on the jaw*"—that's one of the basic reasons why ASF wheels so clearly out-perform ordinary wheels. *ASF jaws stay tight.* Ask yourself what a virtual elimination of slack and backlash means to you in terms of longer jaw life, less wear on king-pins, fewer repairs, smaller spare-parts inventory. There's only one answer: a shock-absorbing jaw that protects itself—and the rest of the rig—*is a jaw that saves money.*

There's a way to prove it! Try just *one* ASF Wheel. Keep an eye on it. "Throw the book" at it if you wish. Like Willett, after that one trial chances are you won't be satisfied with a substitute! See your nearest ASF distributor or write: American Steel Foundries, Hammond Division, Hammond, Indiana.

Make an investment in safety... with

ASF

safety 5th wheels

ASF Safety 5th Wheels

A 3000-pound "compression-grip" saves your maintenance dollars...

COUPLING—as the king-pin enters the jaws, the jaws are forced back against the exclusive ASF rubber buffer block, building up compression.

COMPRESSING—3000 pounds are built up before the lock clears the rear jaw, allowing it to snap to locked position.

LOCKED—and the jaws *remain* under compression. The grip is like a vise; eliminates the slack and backlash that can cost you money in added 5th wheel and king-pin wear.

A quick glance tells you the lock is locked...

LOCKED—as quickly shown by the lever and safety latch—which can *only be in these positions* when the jaws are truly locked.

UNLOCKING—with an easy twist of the wrist. Simply move the safety latch up, and pull the lever forward.

UNLOCKED—ready for uncoupling; parts in lockset position. *Handle can only move back to locked position when jaws are locked in next coupling operation!*

Selected Fleet Films

Continued from Page 212

why our present roads are inadequate and what should be done to remedy the situation. Free loan—10.

Highways Ahead—29 min—Color film tracing the history of our roads from Indian paths to superhighways. Free loan—15.

Let's Get Out of the Muddle—19 min—Shows why our roads are inadequate, how rapidly increasing vehicle registrations and old, worn out roads combine to halt our progress. Shows why and what kind of better roads are needed. Free loan—6, 30.

The Longest Mile—30 min—Color film showing how the general public can join forces with county, state and federal highway officials to obtain better roads. Distribution limited to states east of the Mississippi River. Free loan—3.

Pennsylvania's Highway Story—22 min—Color film showing the importance of adequate highways to the state's economy. The story applies to any state. Free loan—6.

The Road Ahead—74 min—Color film in three reels—shows the operation of a state highway department, administrative as well as operational problems and their solution. Designed for public showing, it shows what goes on in building adequate highways. Free loan—6.

SOURCE LIST

NUMBERS refer to the numbers at the end of the description of each film. Where more than one source is given, write to the closest address.

1. Affiliated Aetna Life Cos.
   Motion Picture Bureau
   151 Farmington Ave.
   Hartford 15, Conn.
2. Allegheny-Ludlum Steel Corp.
   2020 Oliver Bldg.
   Pittsburgh 22, Pa.
3. Allied Chem. & Dye Corp.
   Paving Materials Sales
   The Barrett Division
   40 Rector St.
   New York 6, N. Y.
4. Allis-Chalmers Mfg. Co.
   Adv. and Industrial Press Dept.
   Milwaukee 1, Wis.
5. Aluminum Co. of America
   Motion Picture Section
   854 Alcoa Bldg.
   Pittsburgh 19, Pa.
6. American Assn. of State Highway Officials
   917 National Press Bldg.
   Washington 4, D. C.
7. American Transit Assn.
   292 Madison Ave.
   New York 17, N. Y.
8. American Trucking Assns., Inc.
   Public Relations Dept.
   1424 Sixteenth St., N.W.
   Washington 6, D. C.
9. Ansul Chemical Co.
   Fire Extinguisher Div.
   Marinette, Wis.
10. Association Films
    347 Madison Ave.
    New York 17, N. Y.
11. Bell Telephone Co.
    Contact local office.
12. Bendix Westinghouse Automotive Air Brake Co.
    901 Cleveland Rd.
    Elyria, Ohio.
13. Boeing Airplane Co.
    Seattle Div.
    Library, Plant No. 2
    Box 3107, Seattle, Wash.

(TURN TO PAGE 218, PLEASE)

Selected Fleet Films

Continued from Page 216

14. Bruce Dodson & Co.
2800 Wyandotte St.
Kansas City 10, Mo.

15. Caterpillar Tractor Co.
Peoria 8, Ill.

16. Champion Spark Plug Co.
Sales Dept.
Toledo 1, Ohio.

17. Clark Equipment Co.
Industrial Truck Div.
Battle Creek, Mich.

18. Detroit Automotive Products Corp.
8701 Grinnel Ave.
Detroit 13, Mich.

19. DeVilbiss Co.
300 Phillips Ave.
Toledo 1, Ohio.

20. The Distributors Group, Inc.
756 Peachtree St.
Atlanta, Ga.

21. The duPont Co.
Petroleum Chemicals Div.
Rockefeller Center
Suite 1810, RKO Bldg.
New York 20, N. Y.

22. Electric Auto-Lite Co.
Advertising Dept.
Toledo 4, Ohio.

23. Employers Mutual Liab. Ins. Co.
407 Grant St.
Wausau, Wis.

24. Ethyl Corp.
Chief Automotive Engineer
100 Park Ave.
New York 17, N. Y.
310 South Michigan Ave.
Chicago 4, Ill.
National Bank of Tulsa Bldg.
Tulsa 3, Okla.
1141 Huntley Drive
Los Angeles 26, Cal.

25. Farm Bureau Mutual Auto Ins. Co.
Safety Dept.
246 North High St.
Columbus 16, Ohio.

26. Federal-Mogul Corp.
11031 Shoemaker Ave.
Detroit, Mich.

27. The Four Wheel Drive Auto Co.
Clintonville, Wis.

28. Fruehauf Trailer Co.
Detroit 32, Mich.

29. General Electric Co.
Adv. and Sales Prom. Div.
Distribution Section
Schenectady 5, N. Y.

30. General Motors Corp.
Department of Public Relations
Film Section

New York City and Long Island

1775 Broadway
New York 19, N. Y.

Eastern States

General Motors Bldg.
Detroit 2, Mich.

Western States

508 San Francisco Bank Bldg.
405 Montgomery St.
San Francisco 4, Cal.

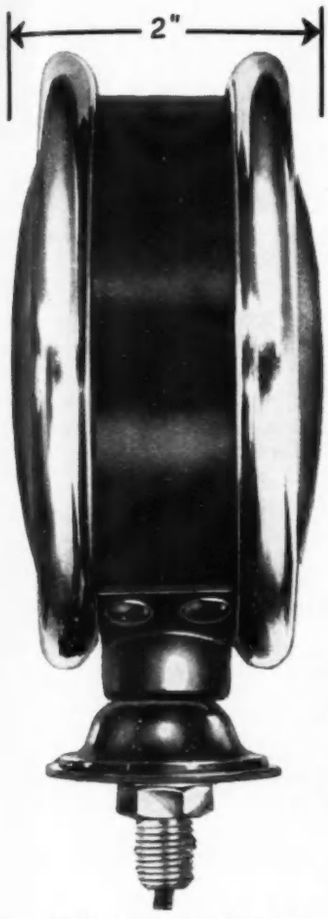
31. Hardware Mutuals Ins. Cos.
200 Strongs
Stevens Point, Wis.

32. Univ. of Illinois
Audio-Visual Aids Service
Div. of Univ. Extension
Champaign, Ill.

33. Indiana Univ.
Audio-Visual Center
Div. of Adult Education
1804 East 10th St.
Bloomington, Ind.

34. Interboro Mutual Indemnity Ins.
270 Madison Ave.
New York 16, N. Y.

(TURN TO PAGE 220, PLEASE)

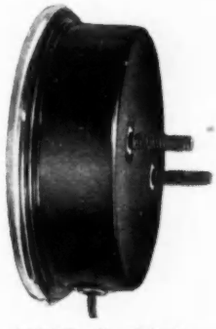


Thin and Simple

2 WAY · CLASS A DIRECTIONAL SIGNAL

A COMPLETE SERIES OF DIRECTION SIGNALS NOW AVAILABLE

551—Single-faced for fender mounting.



551-SF—Semi-flush mounting.

551-LR—Single-faced with L-bracket for rear mounting.

551-FR—Full flush-mount.

3758—SELF-CANCELLING Turn Signal Switch

Never fail, lifetime switch assembly. Positive cam action. Rugged one-piece metal backing plate, fits all steering posts. Included with 550 Series.

Griffin's new Class A, double-faced model shoots an amber signal forward and a red signal to the rear *with one bulb and a single set of wires!*

It's thin—barely two inches deep—because the Stimsonite-Lucite lens *requires no reflector.* Color is stable and the lens is optically accurate. All-steel black enameled housing with stainless steel trim rings makes it both sturdy and smart.

The 550 Series signal kit includes lamps, fuse assembly, current interrupter, wire and self-cancelling switch. A complete line of signal lamps (shown above) for any type of installation are now available through your Griffin wholesaler.

THE GRIFFIN LAMP COMPANY · HAMILTON, OHIO

Export Offices and Showroom, E. W. Lenz Co.
280 Broadway, New York 7, N. Y.
Export Cable Address: Lenzco

GRIFFIN
AUTOMOTIVE SAFETY LIGHTING

Selected Fleet Films

Continued from Page 218

35. International Harvester Co., Inc.
180 North Michigan Ave.
Chicago 1, Ill.

36. Iowa National Mutual Ins. Co.
Cedar Rapids, Iowa.

37. State Univ. of Iowa
Bureau of Audio-Visual Inst.
Extension Div.
Iowa City, Iowa

38. The Jam Handy Organization
2821 East Grand Blvd.
Detroit 11, Mich.

39. Univ. of Kansas
Bureau of Visual Instruction
Lawrence, Kan.

40. Kunz Motion Picture Service
1319 Vine St.
Philadelphia 7, Pa.

41. Liberty Mutual Ins. Co.
175 Berkeley St.
Boston 17, Mass.

42. The Lincoln Electric Co.
12818 Coit Rd.
Cleveland 1, Ohio.

43. Lumbermans Mutual Casualty Co.
PSFS Bldg., 12th and Market Sts.
Philadelphia, Pa.

44. Markel Service, Inc.
90 John St.
New York 7, N. Y.

45. Modern Talking Picture Service
45 Rockefeller Plaza
New York, New York

46. Motor Truck Assn. of Southern Cal.
605 West Seventh St.
Los Angeles, Cal.

47. National Advisory Committee for Aeronautics
1724 F St., N.W.
Washington 25, D. C.

48. National Assn. of Automotive Mutual Ins. Cos.
20 North Wacker Drive
Chicago 6, Ill.

49. National Automobile Transporters Assn.
Accident Prevention Dept.
2627 Cadillac Tower
Detroit 26, Mich.

50. National Board of Fire Underwriters
Film Library
Bureau of Communication Research
13 East 37th St.
New York 17, N. Y.

West of Rocky Mts.

Merchants Exchange
San Francisco 4, Cal.

51. National Carbon Co.
Div. of Union Carbide and Chemical Corp.
30 East 42nd St.
New York 17, N. Y.

52. National Highway Users Conference
National Press Bldg.
Washington 4, D. C.

53. National Safety Council
Film Bureau
425 North Michigan Ave.
Chicago 11, Ill.

54. Norton Co.
Publicity Dept.
Worcester, Mass.

55. Univ. of Oklahoma
Education Materials Service
Extension Division
Norman, Okla.

56. Pacific Intermountain Express
Public Relations Div.
299 Adeline St.
Oakland, Cal.

57. Princton Film Center
Princeton, N. J.

58. Progressive Pictures
6351 Thornhill Drive
Oakland 11, Cal.

(TURN TO PAGE 224, PLEASE)

New Chevrolet Trucks

deliver hour-saving power that saves you money, too!

New Chevrolet trucks bring you great new engine power in every model—from light-duty pickups to heavy-duty tractors. And this new power means important savings of both time and money on the job!

YOU SAVE TIME WITH GREATER SAFETY

That's because new Chevrolet trucks permit you to maintain faster schedules *without* driving at higher maximum road speeds. Thanks to greatly increased acceleration and hill-climbing ability, you can save time where it counts. Instead of trying to make up for lost time, you actually cut down the time lost at traffic lights and on steep grades.

YOU SAVE PLENTY ON OPERATING COSTS

New Chevrolet trucks bring you high-compression power that saves you money every mile. All three great engines—the "Thriftmaster 235," the "Loadmaster 235" and the "Jobmaster 261"* deliver greater horsepower *plus* increased operating economy. In addition, the mighty "Jobmaster 261" engine reduces the need for operating in low gears on heavy-duty jobs. As a result, you shift gears less . . . save more on gas.

Now's a good time to see your Chevrolet dealer about a time-saving, money-saving truck. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

CHEVROLET

MOST TRUSTWORTHY TRUCKS ON ANY JOB!

CHEVROLET ADVANCE-DESIGN TRUCK FEATURES

THREE GREAT ENGINES—The new "Jobmaster 261" engine* for extra heavy hauling. The "Thriftmaster 235" or "Loadmaster 235" for light-, medium- and heavy-duty hauling. **NEW TRUCK HYDRA-MATIC TRANSMISSION***—offered on ½-, ¾- and 1-ton models. Heavy-Duty **SYNCHRO-MESH TRANSMISSION**—for fast, smooth shifting. **DIAPHRAGM SPRING CLUTCH**—improved-action engagement. **HYPOID REAR AXLE**—for longer life on all models. **TORQUE-ACTION BRAKES**—on all wheels on light- and medium-duty models. **TWIN-ACTION REAR WHEEL BRAKES**—on heavy-duty models. **DUAL-SHOE PARKING BRAKE**—greater holding ability on heavy-duty models. **NEW RIDE CONTROL SEAT***—eliminates backrubbing. **NEW, LARGER UNIT-DESIGNED PICKUP AND PLATFORM STAKE BODIES**—give increased load space. **COMFORTMASTER CAB**—offers greater comfort, convenience and safety. **PANORAMIC WINDSHIELD**—for increased driver vision. **WIDE-BASE WHEELS**—for increased tire mileage. **BALL-GEAR STEERING**—easier, safer handling. **ADVANCE-DESIGN STYLING**—rugged, handsome appearance.

**Optional at extra cost. Ride Control Seat is available on all cab models, "Jobmaster 261" engine on 2-ton models, truck Hydra-Matic transmission on ½-, ¾- and 1-ton models.*

Selected Fleet Films

Continued from Page 220

59. The Protectoseal Co.
Sales Department
1920 South Western Ave.
Chicago 8, Ill.

60. Proto Tool Co.
2209 Santa Fe Ave.
Los Angeles 54, Cal.

61. Sarra, Inc.
16 East Ontario St.
Chicago 11, Ill.

62. Shell Oil Co.
Film Library, Room 4226
50 West 50th St.
New York 20, N. Y.

63. South Bend Lathe Works
425 East Madison St.
South Bend 22, Ill.

64. South Carolina Univ.
Audio-Visual Aids Bureau
Columbia, S. C.

65. Standard Oil Co. of Cal.
225 Bush St.
San Francisco, Cal.

66. Superior Coach Corp.
Sales Promotion Dept.
Lima, Ohio.

67. Syracuse Univ.
Educational Film Library
Collendale near Lancaster
Syracuse 10, N. Y.

68. Univ. of Tennessee
Div. of Univ. Extension
Univ. Film Library
Knoxville, Tenn.

69. The Texas Co.
Public Relations Dept.
135 East 42nd St.
New York 17, N. Y.

70. Thermoid Co.
Automotive Replacement Parts Div.
Trenton, N. J.

71. Tomkins Films
1044 West Edgeware Rd.
Los Angeles 26, Cal.

72. U. S. Bureau of Mines
Graphic Services Section
4800 Forbes St.
Pittsburgh 13, Pa.

73. Utica Mutual Ins. Co.
First National Bank Bldg.
Utica, N. Y.

74. Commonwealth of Virginia
State Board of Education
Film Production Service
Richmond 16, Va.

75. Westinghouse Electric Corp.
Film Div.
Box 868, 511 Wood St.
Pittsburgh 30, Pa.

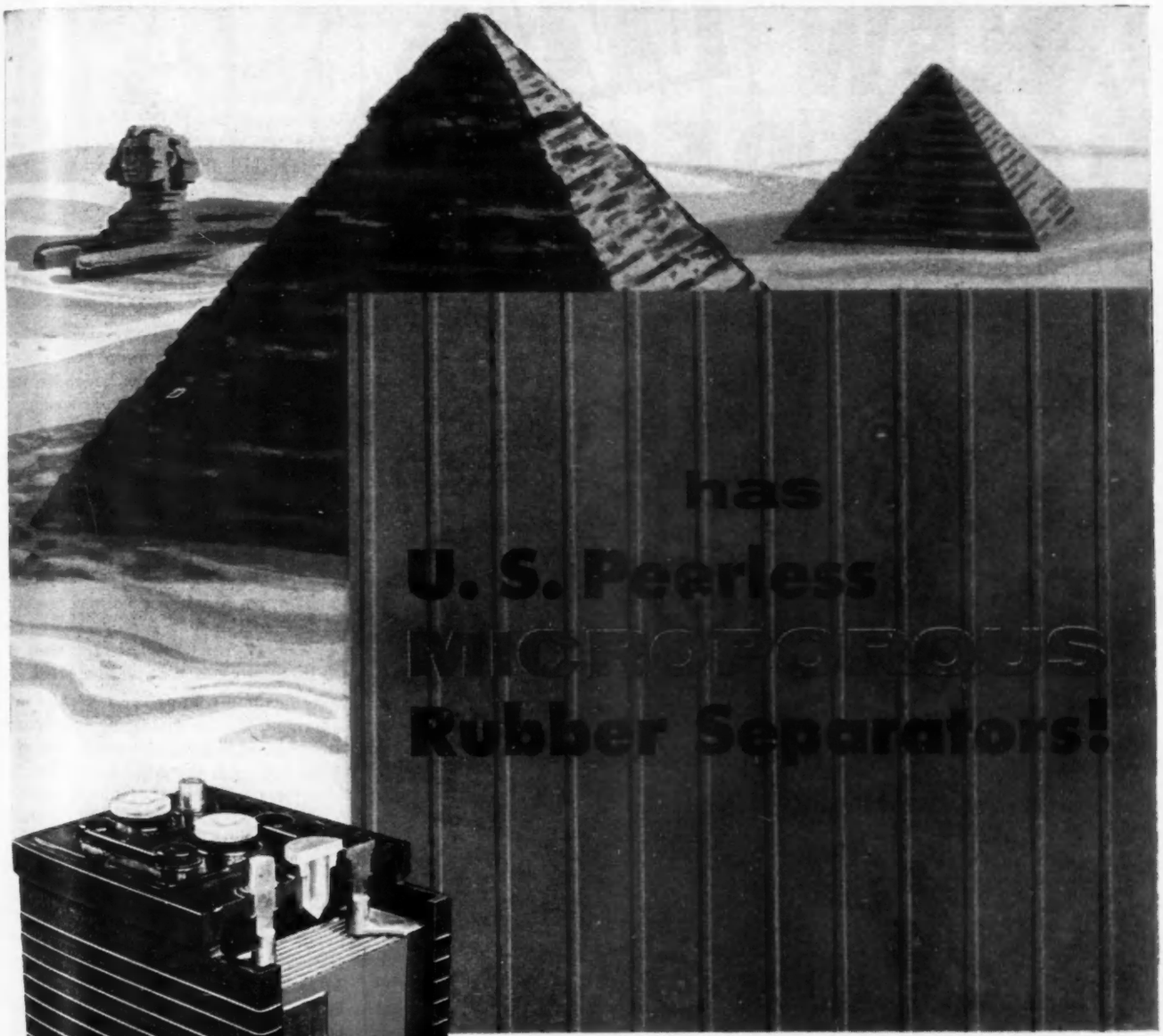
76. The White Motor Co.
Sales Promotion Dept.
842 East 79th St.
Cleveland 1, Ohio.

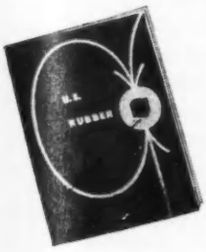
END

Please Resume Reading Page 146

"I used to go crazy trying to answer 'til I found out it was only a diesel!"

The battery that ENDURES





Write to address below for free copy of informative booklet on the high-performance, low-upkeep U. S. Peerless Rubber Battery Separators.

Separators are a critical factor in battery life. U. S. Peerless Microporous Rubber Separators actually *outlast the plates.* Peerless is unaffected by overcharging, battery acid, heat, or plate pressure and will not get mushy or soft in service. Not even a broken plate can cut through them. They are unbeatable in prolonging battery life in rugged duty.

What about performance? U. S. Peerless Microporous Rubber Separators gain in electrical resistance when the temperature is high and reduce the effects of overcharge, a common cause of battery failure. *When the temperature is zero,* they permit 20% faster cranking speed, 10% more starting power. That's because of the high porosity of Peerless.

Do what other cost-minded fleet owners are doing—specify U. S. Peerless, and get more for your battery dollar.

UNITED STATES RUBBER COMPANY

Electrical Wire and Cable Department • Rockefeller Center, New York 20, N. Y.

US RUBBER

Report Indicates More Lube, Less Oil with Liqui-Moly

RESULTS of laboratory tests on Automotive Liqui-Moly have been announced by Moly Motor Products Corp., New York City. The tests, conducted for the company by Motor Vehicle Research, Inc., South Lee, N. H., were run during October, November and December last year.

Seven identical Briggs-Stratton 2-hp engines were set up and operated for a period of two months. All of the engines were lubricated with recognized brands of premium grade motor oil. In addition, three of these were plated with Liqui-Moly, according to the directions shown on the can.

After 117 hours of continuous running, these results were reported:

1. The three engines plated with Liqui-Moly had consumed up to 56 per cent less motor oil than the other four engines.
2. The per engine gasoline consumption of the four engines not treated was 17 per cent greater than the three engines that were treated.

Immediately after these results were obtained, all the motor oil was drained from the seven engines until they were bone dry. All the engines were started and restarted until they finally seized—required 90 lb torque to turn crankshaft one revolution.

The four engines which had contained motor oil alone reached that limit in an average time of 19 min each. The three engines which had been previously plated with Liqui-Moly ran for an average of 12 hr, 40 min before they reached the limit. One of the treated engines ran for more than 17 hr before it reached the 90 lb limit.

These tests were not conducted to prove that vehicles can run without oil but to demonstrate that a Liqui-Moly plating will provide protection to an engine against seizure in case the motor oil should accidentally be lost. Other features claimed for Liqui-Moly include reduced engine friction, lower engine operating temperatures and oil and gas consumption.

Automotive Liqui-Moly consists principally of molybdenum disulfide, submicronized and suspended in a fluid vehicle compatible with motor oils. Because of the peculiar chemical structure of the MoS_2 molecule, Liqui-Moly "plates" itself to the metal bearing surfaces to prevent metal-to-metal contact, reducing friction, wear and seizures.

ELIMINATE *dangerous and costly*

brake failures!

Graham-White AUTOMATIC DRAIN VALVE

WATER, OIL, SCALE, AND SLUDGE are dangerous enemies of air pressure systems and can cause costly brake failures, damaged diaphrams and governors, or frozen and broken air lines. All are eliminated with the Graham-White Automatic Drain Valve.

The Graham-White Drain Valve is the first *really complete answer* to a problem that has plagued the truck and bus industry for years . . . human neglect or error in the manual draining of air reservoirs and lines. Now, the Graham-White Valve gives you *automatic* draining — in regular and frequent cycles—that keeps pressure-operated equipment BONE-DRY!

The Graham-White Automatic Drain Valve is built to last. It is built to operate under the most extreme circumstances. Users report over a hundred thousand miles of bus operation with NO MECHANICAL DIFFICULTY — NO FAILURE OF THE VALVE! Even in sub-zero weather, the Graham-White Automatic Drain Valve keeps right on operating. It never freezes, never gums-up, NEVER STOPS PROVIDING YOUR PRESSURE SYSTEM WITH ASSURED PROTECTION.

Equip all your air reservoirs with the Graham-White Automatic Drain Valve that is "PERFECTLY SIMPLE, SIMPLY PERFECT."

Actual size valve, cut-a-way to show working parts.

The Graham-White Automatic Drain Valve is simple and easy to install, fool-proof in operation. Its solid construction (bronze, brass, Buna N rubber, and stainless steel) guarantees years of trouble-free performance. More and more outstanding truck and bus operators, railroads, and users of stationary compressed air installations are using the Graham-White Automatic Drain Valve as standard equipment.

For full details on the GW Automatic Drain Valve, Write Distributor Nearest You

East Coast...WILLIAM GREEN & CO.
Roanoke, Virginia

West Coast . . . S. A. STEPHENS CO.
55 New Montgomery St., San Francisco 5, Cal.

Canada . . . THE HOLDEN CO., LTD.
614 St. James St., West, Montreal 3, Quebec, Canada

A PRODUCT OF GRAHAM-WHITE MANUFACTURING COMPANY, SALEM, VIRGINIA

Diesel Engine Troubleshooting

2-CYCLE DIESEL

1. Uneven running

Faulty injector timing
Insufficient fuel supply
Improper governor adjustment
One or more cylinders cutting out

2. Engine stalling

Too low idle setting
Low coolant temperature
Too sudden application of load at low speeds
One or more cylinders cutting out
Hunting governor

3. Lack of power

a. Engine adjustment
Governor out of adjustment
Improper rack setting
Improper injector timing
Improper valve lash

b. Insufficient fuel
Air leaks
Flow obstruction
Defective fuel pump

c. Insufficient air
Clogged air cleaners
Obstructed blower intake
Low compression
Excessive exhaust back pressure

4. Insufficient fuel

a. Air leaks
Low fuel supply
Loose connections, cracked lines
Damaged primary fuel filter gasket
Faulty injector tip assembly

b. Flow obstruction
Restricted primary, secondary, injector fuel filters
Foreign material in lines

c. Defective fuel pump
Relief valve fails to seat
Worn vanes or housing
Defective fuel pump drive

5. Detonation

Defective injectors
Leaking fuel connections in head
Crankcase dilution (fuel leaks)

6. High oil consumption

a. External leakage
At gaskets or oil seals
At crankcase breather
At air box

b. Internal leakage
Blower oil seals
Cylinder block end plate

c. Cylinder oil control
Defective piston rings
Loose piston pin retainer
Scored liners or pistons
Worn crankshaft thrust washers
Misaligned piston and rod
Worn camshaft bearings
Worn main or con rod bearings

7. Low oil pressure

a. Lube oil
Low oil level
Improper oil viscosity
Fuel dilution

b. Pressure gage
Faulty gage
Gage line obstruction
Plugged orifice

c. Circulation
Clogged strainer
Clogged cooler
Cooler by-pass valve not functioning

(TURN TO PAGE 231, PLEASE)

Diesel Troubleshooting

Continued from Page 228

Defective pressure regulator valve
Worn main bearings
Missing gallery or crankshaft plugs

d. Oil pump
Clogged intake screen
Defective relief valve
Air leak in pump inlet system
Worn pump
Flange leak at pressure side

8. Low oil pressure
Low crankcase oil level
Dilution of crankcase oil
Improper grade, type of lubricant
Worn main bearings, shaft journals
Sticking relief valve in oil pump

9. Excessive crankcase pressure
a. Cylinder blowby due to
Leaking head gasket
Defective piston or liner
Worn or broken piston ring

b. Restricted breather

c. Air from blower or air box due to
Excessive exhaust back pressure
Damaged blower to block gasket
Damaged engine end plate gasket

10. Cold weather starting
a. Low starting rpm
High oil viscosity
Infrequent oil changes
Low battery output
Defective starting motor
Inoperative air heater

b. No spark due to
Poor or shorted connections
Coil or points defective
Cracked porcelain
No fuel due to
Defective pump
Plugged spray nozzle or filter
Dirt in pump valves
Temperature less than 10 deg above pour point of fuel

c. Pump and switch not operated while engine is cranked

11. Abnormal engine temperatures
a. (Insufficient heat transfer)
Restricted radiator
Scale or deposits in system
Loose fan belt
Improper fan shrouding

b. (Circulation)
Lost coolant level
Collapsed, disintegrated hoses
Defective thermostat
Loose pump impellor
Combustion gases in coolant
Air in cooling system

12. Smoking exhaust
a. (Insufficient combustion) Black or Gray
Excessive exhaust back pressure
Restricted air inlet due to—
Clogged liner ports
Clogged air cleaners
Emergency stop not completely open
Restricted screen
Clogged engine air ducts
b. (Excess fuel or improper distribution)
Improper injector rack setting
Late injector timing
Faulty injectors
(TURN TO PAGE 232, PLEASE)

Continued from Page 231

4-CYCLE DIESEL

Lugging engine
Blown air box cover plate gasket
Improper grade of fuel

c. (Misfiring cylinders) white
Faulty injectors
Low compression
Low cetane fuel
Cylinder cutting out
Worn piston rings or cylinders
Oil leaks into air box or blower

1. Engine fails to start

Poor compression
No fuel in tank
Fuel does not reach cylinders
Plugged air cleaner
Too slow cranking speed
Inoperative governor
Air lock in fuel or injector pump
Restriction between filter and pump
Worn transfer pump vanes
Safety switch closed
Improper injection timing
Gummed or corroded nozzles
Condensation in fuel lines

2. Engine stops

Insufficient fuel reaching injector pump
Piston seizure
Safety shut down due to overheating
Improper governor adjustment
Excessive overloads (stall)

3. Engine misses

Unsuitable grade of fuel
Water in fuel on lines
Poor compression
Clogged air cleaner
Sticking valves
Leaking valves
Insufficient fuel supply to cylinders
Obstruction in air intake
Air logged fuel lines
Improper injector timing
Blocked delivery valves
Damaged injector plungers
Clogged injector nozzles

4. Engine surges

Inoperative governor or improper adjustment
Damaged control rods or cables
Sticking control rack
Insufficient fuel supply from primary system
Air entrainment in pump or lines
Improper pump timing

5. Loss of power

Poor compression
Insufficient fuel supply to cylinders
Incorrect fuel injection timing
Clogged air cleaner
Improper governor action
Overheating engine
Unsuitable fuel oil
Restricted exhaust
Restricted nozzles
Leaking intake exhaust valves
Low fuel pressure
Worn fuel pump

6. Detonation

Engine not warmed up
Early timing of fuel injection
Leaking injection nozzles
Poor grade of fuel
Carbonized head or pistons
Hot spot in cylinder head
Engine overheating

(TURN TO PAGE 235, PLEASE)

Diesel Troubleshooting

Continued from Page 232

Excessive valve clearance
Wrong type valve used
Weak or broken valve springs
Worn rings or pistons

7. Low compression

Sticking rings
Burned valves
Incorrect tappet clearance
Worn valve guides
Weak or broken valve springs
Incorrect valve timing
Leaking cylinder head gasket
Worn pistons and rings

8. Overheating

Restricted radiator passages
Clogged radiator (external)
Inoperative radiator shutter
Low water
Bent or broken fan blades
Late fuel injection timing
Incorrect valve timing
Dirty air cleaner
Poor quality, insufficient or dirty oil
Dragging brakes

9. Insufficient fuel

Plugged fuel tank cap
Air leaks in suction side between pump and tank
Primary or secondary filter clogged
Inoperative fuel supply pump
Air in lines between supply pump and injection pump
Stuck injection pump control tack rod
Inoperative delivery valve (injection pump)
Sticking injection pump valve plunger
Improper injection pump setting
Governor stop rod in closed position
Inoperative governor
Leaking high pressure lines
Clogged injection nozzle
Excessive opening pressure (injection nozzle)
Water or dirt in fuel

"Sure, I'm the driver. Now, stop staring and put some gas in the tank!"

10. Low fuel pressure gage reading

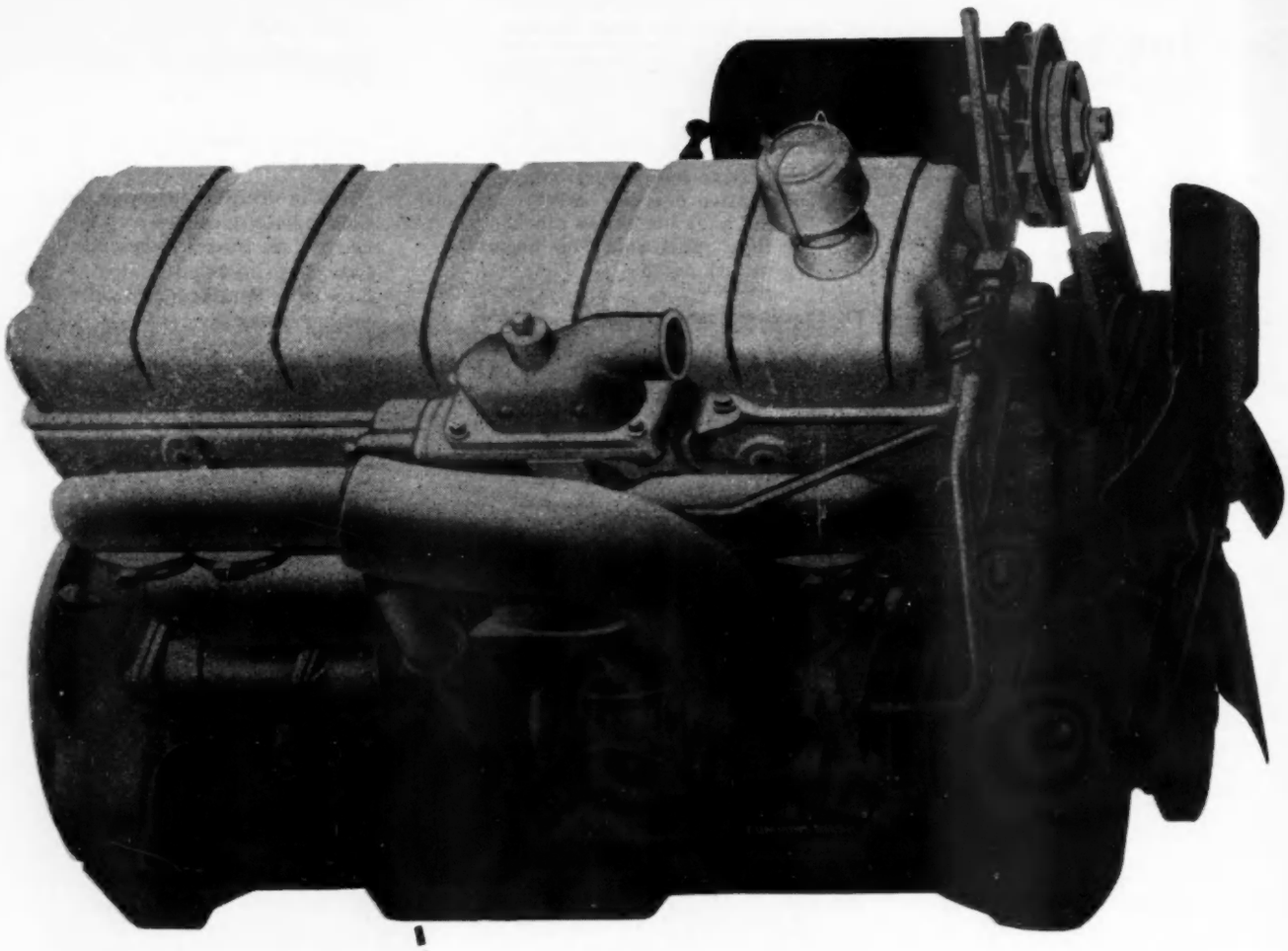
No fuel in tank
Plugged fuel tank cap vent
Air leaks in suction lines
Clogged primary or secondary filters
Inoperative fuel supply pump
Inoperative overflow valve
Line to gage broken or pinched
Too light or too thin fuel grade
Worn fuel pump

11. Excessive exhaust smoke — blue white

Engine cold
Poor compression
Unsuitable fuel
Water or air in fuel
Excessive lubrication on cylinder walls

12. Excessive exhaust smoke — Brown and black

Dirty or leaking injection nozzle
Clogged air cleaner
Early fuel injection timing
Late fuel injection timing
Excessive fuel fed to faulty injection pump
Poor compression
Unsuitable fuel
Rarefied atmosphere
Improper valve setting



150 h.p. JBS 600 gives Cummins Diesel economy

CUMMINS **Cummins**

Engine Company, Inc. • Columbus, Indiana

Cummins newest diesel cuts fuel costs as much as 33%

and performance to medium heavy trucks!

This diesel is engineered especially for medium heavy-duty truck service. It features rugged 4-cycle design for long life and minimum maintenance costs.

It embodies all the features of the exclusive Cummins system of fuel metering and injection; is simple and easy to maintain. This system has made Cummins Diesels famous for greater efficiency under all operating and load conditions. Every gallon of fuel produces more mileage and the JBS-600 gives top performance on less expensive diesel fuel. *(No. 2)*

The Cummins JBS-600 Diesel is offered as standard or optional equipment by the leading truck and bus manufacturers. Their local representative or the Cummins dealer in your area will give you specifications.

Leader in rugged, lightweight, high-speed diesel engines [60-600 h.p.]

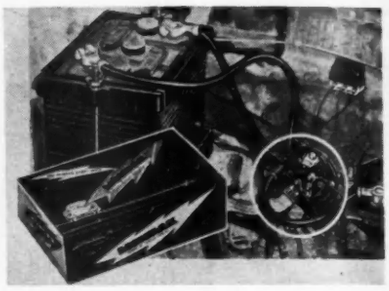
New Products

Continued from Page 52

type" capacity, is being introduced by Marquette Mfg. Co., Minneapolis, Minn. It readily handles up to 5/32-in. electrodes, and can be used wherever 220 volt, 60 cycle, single-phase current is available. It is built to equal or exceed NEMA and REA specifications.

P24. Voltage Selector

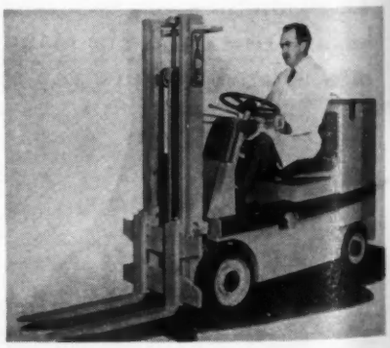
Truck drivers can double the starting voltage right from the driver's seat, according to Illinois Auto Electric Co., Chicago, Ill., distributors of the



new "Mondak" voltage selector switch. It channels the power of two batteries to spin the engine at double speed for hard starting. Operation of the switch is controlled by a knob on the dashboard, which allows the driver to select either 6- or 12- or 12- or 24-volt power. When the knob is released, the batteries charge in parallel, yet separate as soon as the engine is shut off. It provides selective 6- or 12-volt power for trailer marker lights, and trucks having auxiliary engines can now be started on 12 volts.

P25. Lift Truck

Designed for over-the-road vehicle loading, a new low-clearance, narrow-width electric fork lift truck is announced by Yale Materials Handling



Division, Yale and Towne Mfg. Co., Philadelphia. A 68-in. mast height as-

(TURN TO PAGE 242, PLEASE)

CK TIRE IN YEARS

UP TO 47% MORE TREAD LIFE!

design!
tread!
body!

Only this new GOODYEAR TRACTION HI-MILER gives you

NEW BALANCED DESIGN — cord plies are laid at scientifically balanced angles which insure every cord carries an equal load. This, plus many other great improvements, assures as much as 47% longer tread life!

NEW FIVE RIB STOP-NOTCH TREAD—deep-cut slots in the five wide riding ribs compress into sharp-edged "teeth" as they meet the road—provide greater nonskid safety—24% more traction.

NEW TRIPLE-TEMPERED CORD BODY — the strongest, toughest cord modern science has produced for tire construction. So lastingly durable it controls tire "growth" — superbly resistant to bruising, heat and blowout—will safely take more recaps. Available in Nylon or Rayon.

In 3-T Rayon at regular price
3-T Nylon only slightly more

Hi-Miler—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

OD YEAR

HAULED ON GOODYEAR TRUCK TIRES THAN ON ANY OTHER KIND

New Products

Continued from Page 238

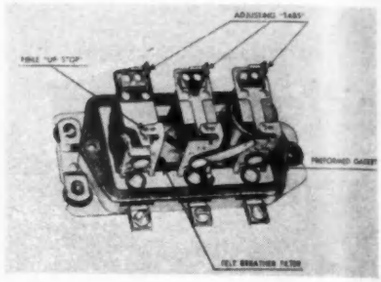
sures that any opening that will clear the mast will also clear the operator. Available in 2000 and 3000 lb capacities, it is powered by a 15 kwh, 30-volt battery. It has a 50-in. wheel base and 36-in. forks, pivots around a 90 deg corner in a 61-in. aisle and can make a right angle turn in a 119-in. aisle. Forks adjust from 10 to 31½ in. outside. It stacks 100 in. above floor level. Tilt is 3 deg forward and 10 deg backward. Under-carriage of the truck will clear a 41½ per cent grade.

P26. Ratchet Adaptor

A new heavy duty ¾-in. square drive ratchet adaptor is now being produced and marketed by B. K. Sweeney Mfg. Co., Denver, Colo. The Model No. 67A converts any combination of work handle, extension, socket or torque wrench into a reversible, ratcheting action tool. It provides ratcheting speeds on many nuts where application of standard ratchet wrenches is impractical. Ratcheting action of the Sweeney adaptor requires a handle movement of only 19 deg.

P27. Voltage Regulator

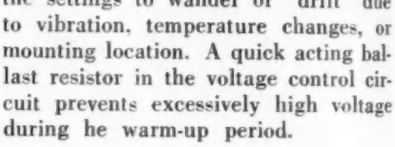
A number of major improvements in voltage regulator design are now appearing in Kem voltage regulators according to Kem Mfg. Co., Inc., Fair Lawn, N. J. A basically new type of



adjustment is provided by metal "tabs" on each unit. No special tools are required and there is no tendency for the settings to wander or "drift" due to vibration, temperature changes, or mounting location. A quick acting ballast resistor in the voltage control circuit prevents excessively high voltage during he warm-up period.

P28. Compression Tester

Fisher Products, Long Island City. N. Y., now has available a pistol-grip recording compression tester. The



Model No. 285 "MoTest" accommodates up to eight cylinders. Kit includes, in addition to the basic instrument, an angular adaptor (for V-8's, etc.), an extension adaptor, a supply of recording charts, spare rubber cones and valves.

P29. Tow-Loader

A new handling device, called the "Tow-Loader" and just announced by Towmotor Corp., Cleveland, Ohio, makes it possible to use thin pallet sheets in place of the conventional fork entry type pallets used in handling unit loads. Consisting of a modified "Towmotor Unloader" accessory with a gripping device built into the pusher frame, the "Tow-Loader" pulls the palletized load onto either blades or forks and pushes it off at set-down points. With the "Tow-Loader," the

(TURN TO PAGE 244, PLEASE)

LS builder, R. P. Olsen & Son, Omaha, built this 9-foot refrigerated body for Wilber Wiener, Co., Wilber, Neb.

This 23'Lx7½'Wx8'H van body was built of LS by General Body Co., Chicago for Hassett Storage & Moving, a Chicago, Ill., member of Allied Van Lines.

Whether Your Trucks are LARGE or small

—you can get an LS Body tailored to the exact size *you* need for efficient, LOW-COST operation

There's no limit to size of truck bodies built from Lindsay Structure... whether your trucks are large or small, you can benefit from the many money-saving advantages of a functional LS body tailor-made for your specific delivery operation.

The Lindsay method utilizes die-formed standardized LS components fabricated in 78,085 panel sizes... enables body manufacturers to give prompt delivery on a steel or aluminum LS truck body tailored to the exact size and style you need for efficient, low-cost operation.

And, careful standardization of LS parts simplifies repair and maintenance... assures complete uniformity of a fleet's truck bodies—wherever and whenever built.

For years and years of efficient, low-cost operation—equip your next truck with a LS body in *steel or aluminum* . . . it will be one of the best investments you ever made.

There are over 200 LS body manufacturers in the U. S. and Canada to serve you. Or, if you prefer, we will gladly work with you and the manufacturer of your choice. Investigate Lindsay Structure today. Write Lindsay Structure, Inc., 5000 W. Dempster St., Skokie, Ill. In Canada—Lindsay-Wilson, Ltd., 1466 Lake Shore Rd., Long Branch, Ont.

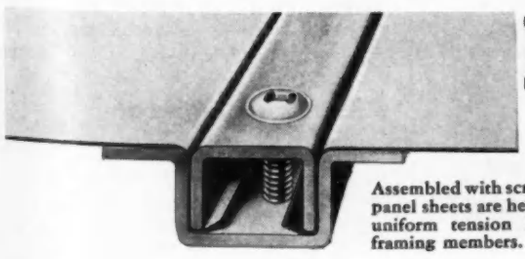
Auto Body Works, Appleton, Wis.

Wilson Motor Bodies, Toronto

Quality Equip. Co., Charlotte, N. C.

Lawrie Wagon & Carriage, Winnipeg

American Body & Equip., K. C., Mo.



Assembled with screws, the panel sheets are held under uniform tension between framing members.

LINDSAY STRUCTURE

LS

Lindsay Structure, Inc.
5000 West Dempster St., Skokie, Illinois

U. S. Patents 2017629, 2263510, 2263511
U. S. and Foreign Patents and Patents Pending

New Products

Continued from Page 242

thickness of the ordinary pallet is saved and the space is completely utilized.

P30. Vehicle Cleaner

A new cleaning compound, Oakite Composition No. 72, can be used mixed with cold water to clean bus and truck exteriors and interiors by manual or mechanical application, according to Oakite Products, Inc., New York City. An alkaline-type powdered material readily and completely soluble in cold or hot water. It is designed for easy removal of road film, oily soils and bug deposits.

P31. New Tool Stand

A new mobile tool stand has been developed by Standard Pressed Steel Co., Jenkintown, Pa. The stand, made of heavy gage steel and mounted on 2½-in. swivel casters, has a cabinet and two drawers. The top is a recessed tray. Known as Model No. 426, the stand's overall dimensions are 18 by 24 in. by 35¼ in. in height. The cabinet is 14 in. high. Each of the drawers is 5 in. high, has roller suspension and individual padlock attachment.

P32. Flow Gun

The Binks Mfg. Co., Chicago announces a new precision flow gun, Model No. 31, designed to provide increased efficiency in flowing sealing

compounds such as asphalt, rubber cement and similar heavy materials. Also, it can be used to seal gaskets, mouldings, cracks, corners and crevices on vehicle bodies. In all, a selection of 16 nozzles with orifices of various sizes and shapes for many types of work are offered.

P33. Brake Spring Plier

Champion DeArment Tool Co., announces the new Model No. 614 brake spring plier incorporating a standard hook and point for conventional brake springs as well as a newly designed Bendix fitting for late model cars and trucks. The Bendix fitting is so designed that lifting and prying are unnecessary. The mechanic simply inserts fitting and turns plier—a groove in the fitting lifts spring off pin. Spring is easily replaced on pin by use of specially designed handle.

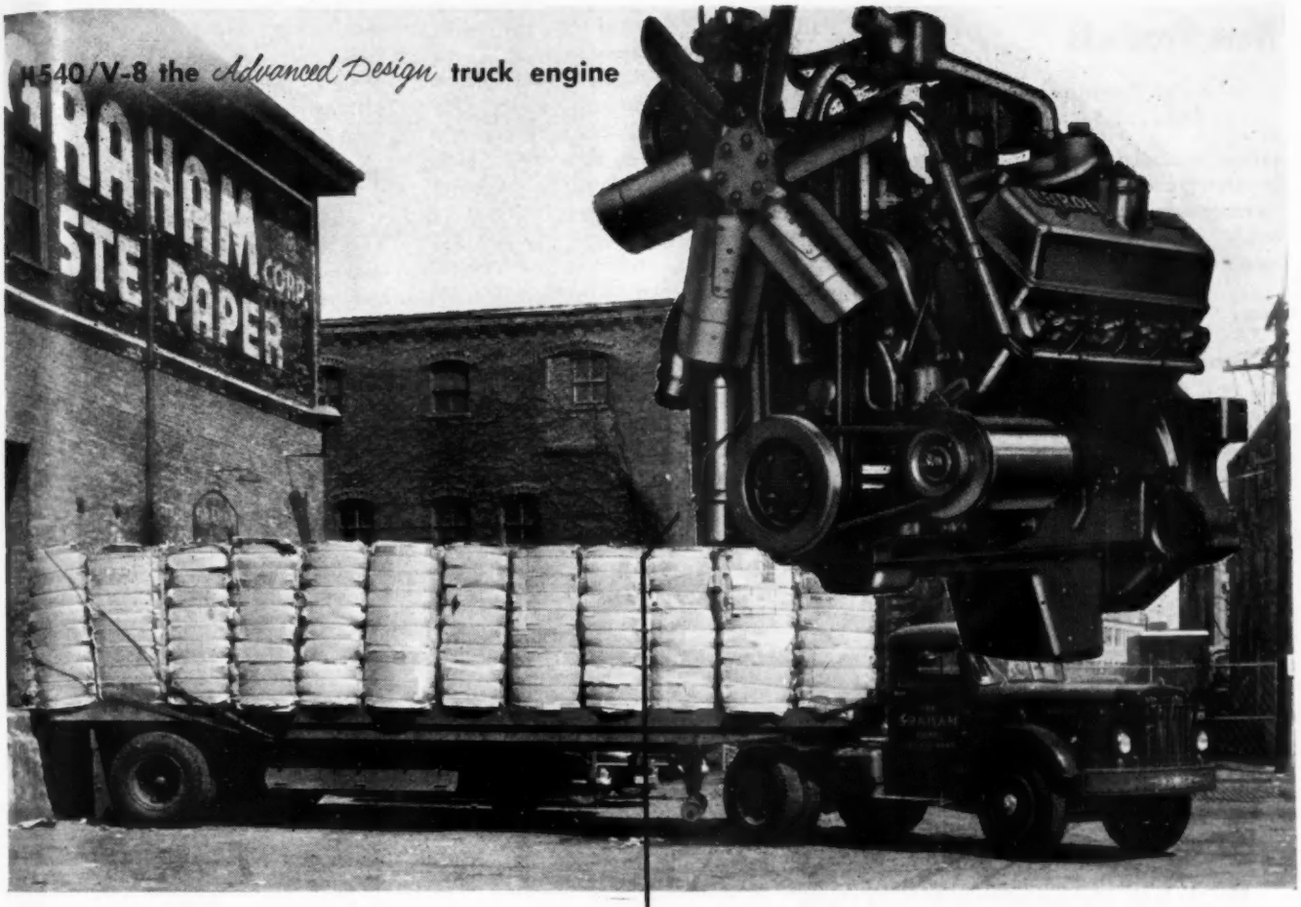
P34. Pipe Line Regulators

A new No. 8900 series of regulators has been announced by Air Reduction Sales Co., New York City, to supersede their No. 86000 series, designed for use with gases supplied by pipeline systems using comparatively low pressures. Features claimed include: greater flow capacities, improved regulation and lower static increment, steady gas pressure thereby eliminating the need for frequent regulator adjustment. They are of the inverse-type design and feature a seating arrangement which requires no nozzle.

P35. Truck Mirror

The R. E. Dietz Co., Syracuse, N. Y., have announced a new, western-style truck mirror, Model No. 78. Fea-

(TURN TO PAGE 246, PLEASE)



LE ROI V-8 POWER

makes light of heavy payloads!

AUTOCAR V-8
powered by 200-hp
LE ROI
H540/V8

The Autocar V-8 is the first heavy-duty highway tractor to give you the money-making advantages of a 200-hp V-8 engine:

Bigger Payloads! Low weight-to-horsepower ratio (only 6 lbs. per HP) lets you carry bigger payloads at higher road speeds.

Fast Acceleration! Le Roi's 200-hp H540/V-8 design gives you greater flexibility for faster trips. High torque rating levels out the hills.

Fuel Economy! Plenty of reserve power lets you operate in the most economical range.

Low Maintenance Costs! Le Roi's valve-in-head design puts maintenance locations out in open, reduces downtime and shop-labor costs. Wet cylinder sleeves can be replaced at a fraction of the cost of reboring the block.

See the Autocar V-8 at your nearest Autocar branch office. Or write Autocar, Ardmore, Pa., for colorful booklet.

LE ROI COMPANY
A Subsidiary of Westinghouse Air Brake Co.
MILWAUKEE 14, WISCONSIN

Plants: Milwaukee • Cleveland — Greenwich — Dunkirk, Ohio • Coldwater, Mich.

E-92

New Products

Continued from Page 244

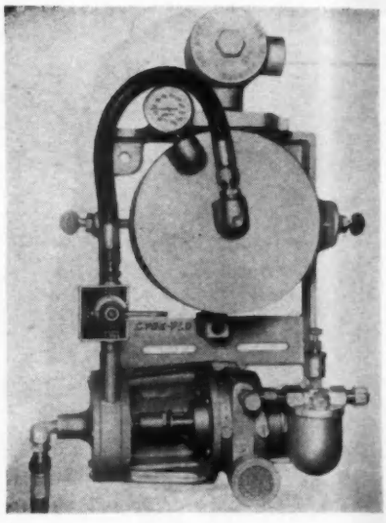
turing multiple bracing for resistance to jarring and vibration, the 6 by 16-in. hammertone gray finish mirror head holds a clear, plate glass mirror mounted in a rubber shock cushion.

P36. Towing Tractor

New features to provide greater driving safety, comfort and simplicity have been incorporated in the re-designed "Clarkette 5" line of general utility towing tractors, according to Clark Equipment Co., Battle Creek, Mich. While basic dimensions of this 500-pound drawbar pull capacity machine have been retained, the driver platform has been lengthened and the brake pedal relocated to provide more room for the operator without affecting the turning radius and the intersecting aisle dimensions. Control lever has been altered to reduce hand fatigue and the center control linkage has been moved to a lower cross bar, so that the control handle is now obstruction free. Exhaust pipe is on the right side of the truck. The Continental N-62 engine has been equipped with revised piston rings and aluminum pistons.

P37. Paint Circulator

Pigmented finishes and fillers can now be hot sprayed regardless of abrasive content with the development of the new "Air Circaflo Pressurematic" heater, announced by Spee-Flo Co., Houston, Texas. It has an integral air motor centrifugal pump which circulates the material from the heater to



the gun and return to maintain a constant hot spray temperature for continuous and intermittent service. The new heating unit is a coil-less heat exchanger that cannot clog and requires no maintenance. Rated at 9 gal per hr on the Model No. 300-APA and 18 gal per hr on the No. 600-APA.

P38. Powdered Electrode

Heavily coated electrodes containing large quantities of powdered metal in their coatings announced by Lincoln Electric Co., Cleveland, Ohio, obtain increased welding speeds on the order of 50 per cent. The major cause of operating difficulties that limit welding speeds is the fact that the welding arc normally creates more heat than can be effectively used by conventional electrodes in melting the parent metal, the core wire and the coating. This excess heat usually melts an excessive amount of parent metal. The arc force throws this excess and some of the melted core wire out of the molten pool. The result may be too much penetration, gouging, undercutting and spatter. Electrodes with powdered metal coatings use this excess heat available in the arc to increase welding speeds. The powdered metal in the

(TURN TO PAGE 250, PLEASE)

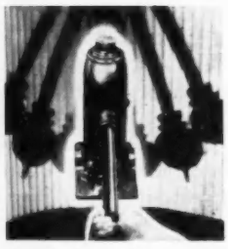
WALKER JACK

"Series 900" Portable Hydraulic

Experienced truck operators know a safe, dependable tool box jack is a "must" to keep pay-loads rolling. That's why you'll find Walker *Series 900* Portable Hydraulics in trucks that go coast to coast or just around the block.

From cap to base, Walker *Series 900's* are the product of years of on-the-job experience; careful, constantly refining engineering; and manufacturing "know-how."

Take the new "Projectile" tank. It's designed in the shape of a heavy armor-piercing shell to withstand shock . . . to better resist eccentric loading . . . and to distribute the load more evenly on the base.



"Pendulum Balance" makes positioning easy. When you lift it by the handle, a *Series 900* automatically takes an upright position. You can't break or lose the cap. It's forged of high carbon steel as an integral part of the coarse-threaded, quickly-adjusted extension screw.

Smooth, dependable operation is assured by "Ryth-Matic" valve action. Suction and discharge valves work in perfect synchronization at lightning speed. And the "Snug-Fit" Power Pump, sealed with specially impregnated cup leathers, saves time and effort. At top height there's extra strength to resist eccentric loads in the "Solid End" Lifting Ram. Lowering is always safely and easily controlled by the "Micro-Accurate" Release.

Yes, for any pay-load, it pays to carry a Walker *Series 900* portable hydraulic in the tool box. See them—try them—at your Walker Jack distributor.

WALKER MANUFACTURING CO. OF WISCONSIN • RACINE, WISCONSIN

Jacks • Exhaust Silencers • Oil Filters

There's a Walker "Series 900" Portable Hydraulic Jack for Every Vehicle In Your Fleet.

8 MODELS

CAPACITIES FROM 1½ TO 50 TONS

What's *News* at Walker

Holds the Heavyweight Title

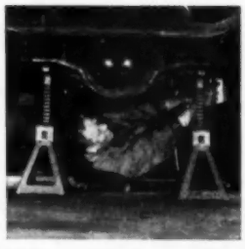
When this Walker 10-Ton Hydraulic Roll-A-Car rolls into action, even the heaviest trucks and buses give ground in a hurry. With its special precision-honed power cylinder, only a minimum of effort is required to safely lift the heaviest loads. Roller bearing wheels and ball bearing casters make for easy maneuvering, quick positioning, and dollying. 3-position handle locks at most convenient operating level and the long, low rugged frame is ideally suited for low clearance. No. 780 goes under and up with ease.

The Modern Spirit of "76"

There's spirited enthusiasm for the revolutionary new Walker "76"—the only completely portable self-contained hydraulic one-end lift on the market . . . unmatched for versatility, dependability, performance. Two tons of hydraulic lifting power make it one of the handiest, most essential shop aids ever devised. A 44″ top height makes it ideal for body and fender work—speeds exhaust replacements, undercoating, shock service and many other "hard-to-get-at" jobs—meets many extra lift requirements. See your Walker Distributor for a "76" demonstration.

Frees "Front-Line" Equipment for Action

Vehicles elevated for long periods need not tie up valuable jacks and lifts—free them for action with Walker "Rigid Racks." Constructed of break-proof malleable iron on the patented "Wedge-Lock" principle, they provide safe dependable service for a lifetime. Walker "Rigid-Racks" won't topple or slip, regardless of height . . . there are no springs or pins to shear. 2 to 5 ton capacity.



Send Walker Jacks Back Home for Repairs

For fast, factory-supervised repairs, with "new jack" guarantee, ask your Walker Distributor for address of the nearest Authorized Walker Jack Service Station.

Walker Leads in Jacks

In transportation . . . in industry . . . in every field of activity where heavy loads must be lifted safely and economically, Walker Jacks are the standard of dependability.

SEE IT FROM YOUR JOBBER

Your Walker distributor is JACK HEADQUARTERS

New Products

Continued from Page 246

coating is melted by this heat and becomes an additional source of metal for the weld, thus permitting an increase in welding speeds.

P39. Cleaning Compound

Oakite Products, Inc., New York City, have announced the development of a new cleaning material, Oakite Composition No. 93, specifically designed for use in steam-generating equipment and in steam guns where the solution is siphoned from an auxiliary tank. Normal working concentrations range between ¼ and 4 oz per gal of water, into which the material is sprinkled and stirred until dissolved. Solutions are non-toxic.

P40. Floor Coating

"NeoFloor" is a new easily applied skid-proof surface coating for concrete, wood and metal floors. Developed by the Pennsylvania Salt Mfg. Co., Philadelphia, for use in plants, shops and other places where oils, greases and chemicals create safety hazards and maintenance problems, NeoFloor is said to provide safe, comfortable footing and long lasting surfaces which stand up under heavy traffic, heat-aging and other rugged conditions. It is a grit-like material anchored in a matrix of resilient neoprene and bonded firmly to the floor with an adhesive primer. Both primer and coating are supplied in liquid form for easy, quick-drying application with brush or roller.

P41. Cleaning Machines

New Models of "Turbo-Blast" parts cleaning machines have been announced by Storm-Vulcan, Inc., Dallas, Texas. Models range in sizes from 20-gal solution capacity to 2300-gal capacity. All models are equipped with impellers which create a violent scrubbing action. Units are heated by steam, fuel oil, natural gas or manufactured gas, thermostatically controlled.

P42. Break-Away Valve

Power Brake Parts Mfg. Co., Chicago, has announced a remote control dual valve for air or vacuum brakes that meets ICC specifications in regard to breakaway brakes, 194.43. It consists of a dual valve mounted to the rear of the cab and controlled by a dash or steering post mounted control lever. Control permits application of trailer brake separately from tractor brake and, in event of trailer breakaway, closes trailer air line and preserves air in tractor system permitting safe function of tractor brakes.

P43. Heavy-Duty Mirror

Anthes Force Oiler Co., Fort Madison, Iowa, has announced a 3/16-in. thick mirror with a 5¼ by 16¼-in. reflective surface. It is mounted in a soft rubber channel and does not touch the metal frame. Arms are made of 10 gage steel and come 14, 16 and 19½ in. long. All equipment for mounting is included.

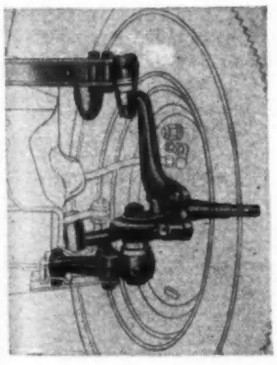
P44. Dock Shelters

Collapsible loading dock shelters announced by Dazzo Products, Inc., New York City, are made of mildewproofed canvas mounted on a frame and extend from the building, when in use, through a "scissors" type extension support. They are made in three different models and extend 6 to 7½ ft out from the building when extended. They provide a waterproof shelter for cargo protection in loading and unloading for almost any size of truck body.

END

Please Resume Reading Page 54

Why did Ford adopt Ball-Joint Front Suspension?



Because with more horsepower you need greater stability, easier steerability!

...and that's not all

The growing trend towards increased engine output places a greater emphasis on easier, safer steering and over-all stability. That's why Thompson's front suspension ball-joints . . . *the first major development in front wheel suspension in 20 years* . . . are incorporated into the latest model Ford.

Other Advantages, Too

There are five *additional* automotive problems solved by ball-joint front suspension: Creating new space for wide modern engine design • Eliminating front suspension and steering bind • Cutting front end overhaul time *by hours* • Reducing lubrication points from 12 to 4 • Increasing service life *many times over.*

Half-Century of Teamwork

This Thompson "Engineered Steering" development is a typical example of Thompson's side-by-side cooperation with the Automotive Industry over the past 50 years.

Yours for the Asking

If you have a steering linkage problem you'd like to discuss with Thompson's skilled and experienced Steering-Linkage Engineers, write, phone or wire Thompson Products, Inc., Michigan Plant, 7881 Conant Avenue, Detroit 11, Michigan.

You can count on

Thompson Products

MICHIGAN PLANT: • DETROIT • FRUITPORT • PORTLAND

Index to Suppliers of Specifications

Truck Specifications

Autocar Division, White Motor Co., Lancaster Ave., Ardmore, Pa.
Brockway Motor Co., 106 Central Ave., Cortland, N. Y.
Chevrolet Motor Div. GMC, Detroit 2, Mich.
Corbitt Co., Henderson, N. C.
Diamond T Motor Car Co., 4401 W. 26th St., Chicago 23, Ill.
Dodge Div. Chrysler Corp., 7900 Joseph Campau Ave., Detroit 31, Mich.
Duplex Truck Co., Hazel St., Lansing 4, Mich.
Fageol Van Trucks—Twin Coach Co., 850 W. Main St., Kent, Ohio
Federal Motor Truck Co., 5780 Federal Ave., Detroit 9, Mich.
Ford Motor Co., 3000 Schaefer Rd., Dearborn, Mich.
Freightliner Corp., 1925 W. Quimby St., Portland, Ore.
FWD Auto Co., E. 12th St., Clintonville, Wisc.
GMC Truck & Coach Div., General Motors Corp., 660 S. Boulevard E., Pontiac 11, Mich.
International Harvester Co., 180 N. Michigan Ave., Chicago 1, Ill.
Kenworth Motor Truck Corp., Seattle 11, Wash.
Linn Coach & Truck Div., Great American Industries, Inc., 334 Chestnut St., Oneonta, N. Y.
Marmon-Herrington Co., 1511 W. Washington St., Indianapolis 7, Ind.
Milford Crane & Machine Co., 143 Buckingham Ave., Milford, Conn.
Oshkosh Motor Truck, Inc., 3203 Oregon St., Oshkosh, Wisc.
Peterbilt Motors Co., 107th Ave. & McArthur Blvd., Oakland 5, Calif.
Reo Motors, Inc., 1331 S. Washington Ave., Lansing, Mich.
Studebaker Corp., 635 S. Main St., South Bend 27, Ind.
Walter Motor Truck Co., 1001 Irving Ave., Ridgewood, Brooklyn 27, N. Y.
Ward-La France Truck Corp., Grand Central Ave. & 11th St., Elmira Heights, N. Y.
White Motor Co., 842 E. 79th St., Cleveland 1, Ohio
Willys Motors, Inc., Wolcott Blvd., Toledo 1, Ohio

Engine Specifications

Buda Co., 154th St. & Commercial Ave., Harvey, Ill.
Continental Motors Corp., Muskegon 82, Mich.
Cummins Engine Co., 5th & Wilson Sts., Columbus, Ind.
Hall-Scott Motor Div., ACF-Brill Motors Co., 2850 7th St., Berkeley 10, Calif.
Hercules Motors Corp., 101 11th St., SE, Canton 2, Ohio
Le Roi Co., 1706 S. 68th St., Milwaukee, Wisc.
Waukesha Motor Co., E. St. & Paul Ave., Waukesha, Wisc.

Bus Specifications

Beaver Metropolitan Coaches, Inc., 24th St. Ext., Beaver Falls, Pa.
Beck & Co., C. D., Sidney, Ohio
Fitzjohn Coach Co., Muskegon, Mich.
Flexible Co., 326 N. Water St., Loudonville, Ohio
GMC Truck & Coach Div., General Motors Corp., 660 S. Boulevard E., Pontiac 11, Mich.
Marmon-Herrington Co., 1511 W. Washington St., Indianapolis 7, Ind.
Southern Coach Mfg. Co., Evergreen, Ala.
Transit Bus Div., Checker Cab Mfg. Corp., 2016 N. Pitcher St., Kalamazoo, Mich.

(TURN TO PAGE 256, PLEASE)

THE DIFFERENCE IN PEDRICK FORMFLEX DESIGN Makes the BIG DIFFERENCE in Performance

THE Pedrick FORMFLEX CHROME OIL RING WITH THE FAMOUS "EQUALIZER"

Radically different type expander gives Formflex rings 5 times more conformability than rings with hump-type expanders. Stops oil waste quickly, yet meters enough oil to lubricate against wear.

ALMOST TRIPLE OIL DRAINAGE—2½ times more open area provided by "Equalizer" and Spacer. Also, no plugging.

UNIFORM PRESSURE DISTRIBUTION — "Equalizer" gives equal outward pressure for more perfect seal—better oil control—longer life.

CHROME FOR LONG LIFE—Faces of steel rails chrome plated for 2 to 4 times longer life.

INDEPENDENT OF GROOVE DEPTH—"Equalizer" does not rely on contact with bottom of groove for pressure or tension.

THE Pedrick CHROME TOP RING FOR HEAVY DUTY ENGINES

2 TO 4 TIMES LONGER LIFE. The solid hard chrome face lasts up to 4 times longer and also reduces wear on cylinder wall and on all the other rings.

ELIMINATES BREAKAGE. A special alloy, centrifugally cast and heat-treated, is exceptionally tough and stands up without breakage even under the heaviest loads.

HEAT SHAPED. Process developed and used exclusively by Pedrick to insure correct and lasting tension, and to *maintain* uniform pressure around entire circumference of ring.

POSITIVE 3-WAY SEAL. Twist-Seal design gives point contacts at cylinder wall and upper and lower sides of ring groove—for quick and lasting seals at all three locations.

WILKENING MANUFACTURING CO.
PHILADELPHIA 42, PA.
In Canada: Wilkening Manufacturing Co. (Canada) Ltd., Toronto

Index to Suppliers

Continued from Page 252

Passenger Cars

Chevrolet Motor Car Div., General Motors Corp., Detroit, Mich.
Dodge Div., Chrysler Corp., 7900 Joseph Campau Ave., Detroit 31, Mich.
Ford Motor Co., 3600 Schaefer Rd., Dearborn, Mich.
Plymouth Div., Chrysler Corp., 6334 Lynch Rd., Detroit 31, Mich.
Pontiac Motor Div., General Motors Corp., Pontiac, Mich.
Studebaker Corp., 635 S. Main St., South Bend, Ind.

Wear Limit Data

Aluminum Company of America, Gulf Bldg., Pittsburgh, Pa.
Clevite Service Inc.—Div. Cleveland Graphite Bronze Co., 6545 Carnegie Ave., Cleveland 3, Ohio.
Eaton Mfg. Co., Macabees Bldg., Detroit 2, Mich.
Federal Mogul Corp., Western Mfg. Div., 250 14th St., San Francisco, Calif.
Hastings Mfg. Co., 1935 Crawford St., Hastings, Mich.
Koppers Co., Inc., Piston Ring Div., Bush & Hamburg St., Baltimore 3, Md.
Lipe-Rollway Corp., 836 Emerson Ave., Syracuse 1, N. Y.
McQuay-Norris Mfg. Co., 1737 Massachusetts Ave., Indianapolis, Ind.
Moog Industries, Inc., 6650 Eastern Ave., St. Louis, Mo.
Ohio Piston Co., 5340 Hamilton Ave., Cleveland, Ohio
Perfect Circle Co., Snout St., Hagerstown, Ind.
Ramsey Corp., 3736 Forest Park Blvd., St. Louis 8, Mo.
Sealed Power Corp., Muskegon, Mich.
Spicer Mfg. Co., 4100 Bennett Rd., Toledo, Ohio
Thermoid Co., 400 Whitehead Road, Trenton, N. J.
Thompson Products Inc., 32555 Euclid Ave., Cleveland, Ohio.
Toledo Steel Products Co., Toledo, Ohio
United Engine & Machine Works, W. Holmes Rd., Lansing, Mich.
U. S. Asbestos Div., Raybestos-Manhattan, Inc., 940 Rayman St., Bridgeport 2, Conn.
Wel-Ever Piston Ring Co., 170 Spielbusch Ave., Toledo, Ohio.
Wilkening Mfg. Co., 1999 S. 71st St., Philadelphia, Pa.

Third Axles and Suspensions

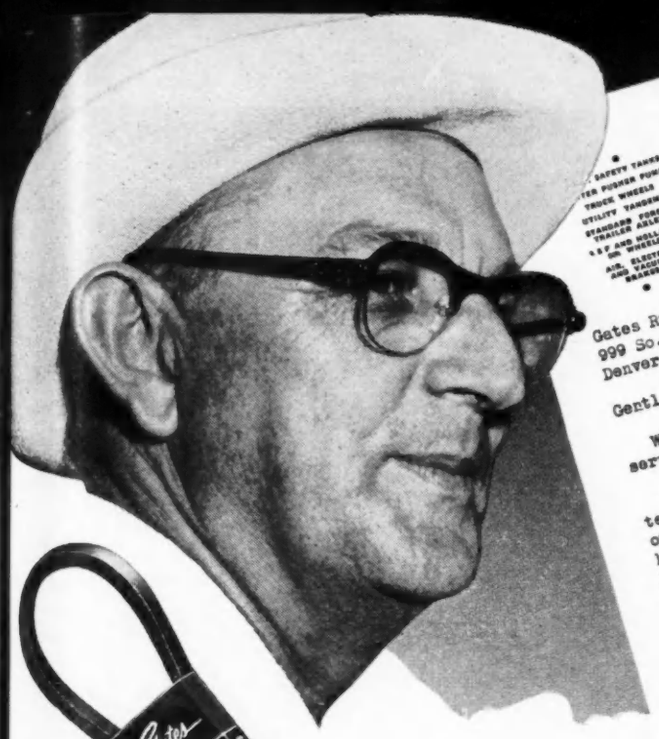
Fabco: FAB Mfg. Co., 1249 67th St., Oakland 8, Calif.
Grico Super-Flex: Grico Two Axle Drive Co., 19840 Eight Mile Rd. W., Detroit 19, Mich.
Hoobler: Union Metal Mfg. Co., 1432 Adams St., Peoria 3, Ill.
Little Giant Products, Inc., 1530 N. Maple Ave., N. E. Canton 5, Ohio
Load Booster: Detroit Automotive Products Corp., 8701 Grinnell Ave., Detroit 13, Mich.
Neway Equipment Co., 1183 E. Laketon St., Muskegon, Mich.
Six Wheels, Inc., 1584 E. 20th St., Los Angeles 11, Calif.
Thornton Drive: Detroit Automotive Products Corp., 3701 Grinnell Ave., Detroit 13, Mich.
Trailmobile Inc. (Western Div.), 901 Gilman St., Berkeley, Calif.
Truck Equipment Co., 1791 Fillmore Ave., Buffalo 14, N. Y.
Trucktor Corp., Route 29, Mountainside, N. J.

((TURN TO PAGE 258, PLEASE)

Hi-Lo Operator: "Yes, that was my wife you saw me with last night, and I expect her to be just what she is 20 years from today."

Warehouse Foreman: "Why, that's unreasonable."

Hi-Lo Operator: "Yes, that's what she is now."



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We thought you might be interested in hearing of the remarkable service we are getting from your products.

We have been in our present type of business for approximately ten years and during that time we handled some belts and hose other than Gates. A few years ago we changed to Gates 100% and have found that we receive from 50% to 75% longer life from your famous T, TG and TS series of belts, than from any other brand that we previously handled.

We service all kinds of trucks and truck-tractors from every state in the Union and have found that your catalogue and specifications are always up to date and we know that a Gates belt is always a perfect fit which assures the customer of maximum service.

Yours very truly,
Truck & Trailer Equipment Co.
E. A. Gudorian

"...always a perfect fit ...last 50% to 75% longer" ..make satisfied customers

tough, multiple-ply cover developed by world's largest maker of V-Belts.

built with rayon cords—the same kind used to increase life of Truck Tires.

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The mark of Specialized research

Look for this T*

To get 50% to 80% more service out of fan belts look for this "T" on both label and belt. The "T" is your assurance of a belt specially engineered for Trucks and Buses.

*REG. U.S. PAT. OFF.

Those 3 headlines tell you *why* the Truck & Trailer Equipment Co., of Waco, Texas, uses Gates "T" Belts *exclusively* in servicing big trucks and truck tractors from all parts of the country.

Like truck maintenance men all across the country, this progressive truck service firm knows from actual experience that Gates "T" Belts — specially engineered for trucks and buses — wear from 50% to 75% and even 80% longer.

To their truck customers therefore, this means road delays due to fan belt failures are practically eliminated . . . trucks keep on schedule . . . *net operating time is kept UP* . . . revenue and profit are increased.

The longer service life of Gates "T" Belts makes money for truck operators another way — belt replacement costs are cut in half, and far more than half according to written statements from Fleet Managers, Purchasing Agents and other users from coast to coast.

It's easy to prove to yourself the cost-cutting, money-making performance of the Gates "T" Belt — simply install it on your equipment and match its record against any other belt you have ever used. There is a Gates Belt jobber near you who will supply you promptly with the Gates Belts you need. The Gates Rubber Co., Denver, U.S.A. — *World's Largest Maker of V-Belts.*

A-37

GATES TRUCK & BUS V-BELTS

Index to Suppliers

Continued from Page 256

Truxmore: Truck Equipment Co., 1791 Fillmore Ave., Buffalo 14, N. Y.

Utility Trailer Mfg. Co., PO Box 3608, Terminal Annex, Los Angeles 54, Calif.

Transmission Ratios

Clark Equipment Co., Transmission Div., Jackson, Mich.

Fuller Mfg. Co., Transmission Div., Kalamazoo, Mich.

Spicer Mfg. Div. of Dana Corp., Toledo 1, Ohio

Warner Gear Div., Borg-Warner Corp., P. O. Box 631, Muncie, Ind.

H. S. Watson Co., 1316 67th St., Oakland 8, Calif.

Spark Plug Data

A. C. Spark Plug Div., General Motors Corp., 1300 N. Dort Hwy., Flint 2, Mich.

Blue Crown Spark Plug Co., Div. of Motor Master Products Corp., 1800 Winnemac Ave., Chicago 40, Ill.

Champion Spark Plug Co., 904 Upton Ave., Toledo 1, Ohio

Electric Auto-Lite Co., Spark Plug Div., Fostoria, Ohio

Hastings Mfg. Co., 375 E. Mill St., Hastings, Mich.

Great Dane's New Straight Truck Body

GREAT Dane Trailer Co. has announced introduction of a new series of straight truck bodies. It is an all-aluminum body constructed on the principle of the Great Dane dry cargo trailer.

The Titian, as the new unit is called, has the vertical post strength members on the outside, with aluminum sheets forming the inside and outside panels. The hollow extruded post reduce considerably the weight of the body while giving it exceptional strength and rigidity.

These new bodies will be distributed in pre-fabricated packages, adaptable in length and doors to meet the needs of the truckers. The bodies are available in 12', 14', 16' and two-foot intervals to any desired length.

For curb-side loading, side doors are available, also. Several types of rear doors are offered: double doors alone or with a tail gate, folding gate, or the tail gate alone.

Selected Maintenance Manuals

Continued from Page 146

How to Get More Stops Between Relines—12 pages—Tips on use and maintenance of brakes and on brake relining. Free—Sales Dept., Automotive and Industrial Brake Lining Division, Grizzly Mfg. Co., 700 West Caroline St., Paulding, Ohio.

How to Prevent Premature Brake Block Failure — 13 pages — Trouble shooting guide on brake block failures. Illustrates and explains causes of premature failure, tells how to correct it. Free—address as above.

Johns-Manville Brake Reliner's Manual — 90 pages — Description of parts and operation of major brake systems and makes designed for passenger car and light truck fleets. Includes assembly, service and maintenance procedures for brakes and related components. **Free**—Friction Materials Dept., Industrial Products Division, Johns-Manville Sales Corp., 1617 Pennsylvania Blvd., Philadelphia 3, Pa.

Johns-Manville Fleet Reliner's Manual—80 pages—**Training** manual for operation, inspection and maintenance of bus, truck and trailer brake and brake control systems especially designed for fleet use. Free—address as above.

Modern Brakes—27 pages—Description of parts and operation of major brake systems and makes. Includes service, maintenance and trouble shooting data for brakes and related components. Free—The Russell Mfg. Co., Middletown, Conn.

Thermoid Brake Service Reference Book—Description of parts and operation of major brake systems and makes. Includes assembly, service and maintenance procedures for brakes and related components. Free—Automotive Replacement Division, Thermoid Co., Trenton, N. J.

Wagner Brake Maintenance Manual—50 pages—Description of parts and operation of major brake systems and makes, including mechanical, hydraulic, air, vacuum and power brakes. Includes assembly, service, maintenance and trouble shooting data. Each $1.00—Sales Promotion Manager, Automotive Division, Wagner Electric Corp., St. Louis 14, Mo.

Warner Electric Brake Service Manual, No. 547F—64 pages—Complete description of operation, maintenance, installation of Warner electric brake system. Fully illustrated to aid in assembly and trouble shooting. Each 20¢—Warner Electric Brake and Clutch Co., Beloit, Wis.

Cooling Systems

Serviceman's Manual on the Automotive Cooling System—41 pages—Covers cooling system operation, selection of coolant, chemical and mechanical cleaning of the cooling system, preparation for summer or winter driving, and a large trouble-shooting guide. Each $2.00—Advertising Dept., E. I. du Pont de Nemours and Co., Inc., 2494 Nemours Bldg., Wilmington 98, Del.

Radiator Water-Flow Chart—Folder for checking radiator water-flow for almost all trucks and passenger cars against manufacturers' specifications. Used for checking flow before and after cleaning to determine efficiency of job done. Free—Dept. R17, Equipment Division, Inland Mfg. Co., Omaha 8, Nebr.

Manual of Cooling System Service, No. AFP-1361—40 pages—Describes servicing and maintenance of the cooling system, including operation, cleaning and trouble-shooting. Free—Automotive Engineering Dept., National Carbon Co., a division of Union Carbide and Carbon Corp., 30 East 42nd St., New York 17, N. Y.

(TURN TO PAGE 262, PLEASE)

not 5,000,000, not 6,000,000, not 7,000,000, but

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Successful Installations

Perfect Circle Nurlizing

gives you these 4 benefits!

- ✶ **Eliminates piston slap**
- ✶ **Gives closer piston fit without scuffing or scoring**
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Perfect Circle Nurlizing has been proved in *over eight million* installations. Nurlizing is fast, accurate, economical, *permanent*...makes worn pistons like new again, at only a fraction of the cost of replacing them! It is the original method of resizing worn pistons by knurling, and although it has been often imitated, it has never been equaled. Insure every engine overhaul with genuine Perfect Circle Nurlizing. Perfect Circle Corporation, Hagerstown, Indiana; The Perfect Circle Co., Ltd., Toronto, Ontario.

Beware of imitations...insist on the original

Perfect Circle Nurlizing

Maintenance Manuals

Continued from Page 260

What You Should Know About Cooling Systems—15 pages—Fully illustrated, brief description of cooling system service and operation. Free—Sales Dept., Warner-Patterson Co., 920 South Michigan Ave., Chicago 5, Ill.

Clutches, Transmissions

Clutch Service Manual—Describes service, maintenance and operation of Lipe-Rollway clutches. Free—Advertising Dept., Lipe-Rollway Corp., 710-840 Emerson Ave., Syracuse 1, N. Y.

Clutch Troubles and Their Cures—11 pages—Trouble-shooting guide for correction of clutch troubles. Includes assembly and inspection tips. Free—Russell Mfg. Co., Middletown, Conn.

Spicer Brown Lipe Clutches, Gear Boxes, No. 230—Specification catalog with an 8-page section on clutch maintenance, trouble-shooting, assembly and disassembly. Free—Spicer Mfg. Division, Dana Corp., Toledo 1, Ohio.

Automatic Transmissions, Vol. III, Thompson Repair and Tune-Up Manuals—Full description of operation, service and maintenance of automatic transmissions. Each $3.00—Service Division, Thompson Products, Inc., 2209 Ashland Rd., Cleveland 3, Ohio.

Transmission Charts—Wall charts showing component parts of transmission gears for Chevrolet, Ford and Plymouth. Specify make when requesting chart. Free—Republic Gear Co., 2197 Beaufait Ave., Detroit 7, Mich.

Facts About Anti-Friction Bearings—Covers ball bearing care and maintenance. Free—Sales Dept., Ahlberg Bearing Co., 3025 West 47th St., Chicago 32, Ill.

AFBDA Bearing Maintenance Reports—Folders covering various aspects of ball and roller bearing maintenance. When requesting, specify information desired. Free—The Anti-Friction Bearing Distributors Assn., 1900 Euclid Ave., Cleveland 15, Ohio.

Bearing Maintenance Handbook—Describes proper care and maintenance of bearings. Free—Advertising Dept., Hyatt Bearings Division, General Motors Corp., Harrison, N. J.

How to Service Ball Bearings in Automotive Equipment—Covers service procedure for ball bearings. Free—Advertising Dept., M-R-C Bearings Service Co., Jamestown, N. Y.

Service Procedure for Ball Bearings, No. ND-A57—12 pages—Fully illustrated procedures on servicing and care of ball bearings. Free—New Departure Division, General Motors Corp., Bristol, Conn.

Bearing Failures and Their Causes—16 pages—Fully illustrated trouble-shooting guide for correction of ball and roller bearing troubles. Free—SKF Industries, Inc., Front St. and Erie Ave., Philadelphia 32, Pa.

Timken Tapered Roller Bearings, Their Care and Maintenance—Procedures for care and maintenance of Timken tapered roller bearings. Free—Advertising Dept., The Timken Roller Bearing Co., Canton 6, Ohio.

Timken Automotive Service Manual—Care and maintenance procedures for automotive roller bearings. Free—address as above.

Electrical, Ignition Systems

Spark Plug Shop Manual, No. A-1920—Describes care and maintenance of spark plugs. Free—Advertising Dept., AC Spark Plug Division, General Motors Corp., 1300 North Dort Highway, Flint 2, Mich.

Storage Battery Technical Service Manual—44 pages—Covers construction, operation, installation, service and maintenance of storage batteries. How to make certain battery repairs is included as well as a section on generator systems. Each 30¢—Assn. of American Battery Manufacturers, 2706 First National Tower, Akron, Ohio.

(TURN TO PAGE 267, PLEASE)

Maintenance Manuals

Continued from Page 262

Automotive Electrical Systems—This first volume of a new series covers electrical fundamentals together with data on construction and operation of the automotive electrical system and its components. Each $1.00—Automotive Electric Assn., 16223 Meyers, Detroit 35, Mich.

Service Manual, Champion Spark Plugs—17 pages—Describes Champion spark plug types, construction and sizes. Includes maintenance, trouble-shooting and heat range data. Free—Champion Spark Plug Co., Toledo, Ohio.

Delco-Remy Operation and Maintenance Handbook, No. DR-324—over 200 pages—Covers operation and maintenance of Delco-Remy electrical and ignition system. Each $1.50—Technical Literature Section, Delco-Remy Division, General Motors Corp., Anderson, Ind.

Delco-Remy Test Specifications, No. DR-324S—Test specifications for Delco-Remy electrical and ignition systems. Each 25¢—address as above.

Delco-Remy Training Charts and Manuals—Eight subjects as follows: Fundamentals of Electricity and Magnetism, Section A, No. DR-5133A, Each $3.00; Storage Batteries, Section B, No. DR-5133B, Each $2.00; Cranking Motors and Series Parallel Switches, Section C, No. DR-5133C, Each $3.00; The Ignition System, Section D, No. DR-5133D, Each $4.00; Generators, Section E, No. DR-5133E, Each $3.00; Standard Duty Generator Regulators, Section F, No. DR-5133F, Each $5.00; Heavy Duty Generator Regulators, Section G, No. DR-5133G, Each $5.00; 12-Volt Electrical Equipment for Passenger Cars, No. DR-5213, Each $6.50. Address as above.

Delco-Remy Film Booklets—These booklets may be used without the accompanying training slide-film. Operation and maintenance of the following subjects are covered: No. DR-5022, Electrical Service; No. DR-5141, Better Ignition; No. DR-Standard Duty Generator Regulators; No. DR-5170 Heavy Duty Generator Regulators, Section 1; No. DR-5190, Heavy Duty Generator Regulators, Section 2; No. DR-5210, 12-Volt Electrical Equipment for Passenger Cars. Free—address as above.

Delco Battery Service Manual, No. 7D-100—16 pages—Covers operation, care, maintenance and trouble-shooting on Delco batteries. Each 50¢—address as above.

Facts About Ignition Coils — 20 pages—Includes data on ignition coil trouble-shooting, correct wiring, and operation of Echlin ignition coils. Free—Echlin Mfg. Co., 220 East St., New Haven 5, Conn.

Maintenance and Operation Manual, No. S-24C—178 pages—Covers starting, charging, ignition, horn, windshield wiper, instrument and lighting circuits. Fully illustrated, it includes trouble-shooting data and information on 12-volt systems. Each $1.50—Parts and Service Division, Electric Auto-Lite Co., Toledo 1, Ohio.

Specification Book, No. S-24CA—Complete test specifications for Auto-Lite electrical and ignition systems. Each 50¢—address as above.

Plug Chek Indicator and Data, No. 809—Maintenance, operation and care of spark plugs. Free—Merchandising Division, Electric Auto-Lite Co., Toledo 1, Ohio.

Wire and Cable Calculator, No. C-551—Data on selection of proper electrical and ignition system wire and cable. Each 10¢—address as above.

Auto-Lite Education Papers — Training manuals on electrical and ignition system as follows: Fundamentals of Electricity, No. T-1, Each 55¢; Magnetism, No. T-2, Each 55¢; Engineer Performance, No. T-4, Each 55¢; Lead Acid Storage Batteries, No. T-5, Each 45¢ Ignition, No. T-7, Each T-5, Each 45¢; Ignition, No. T-7, Each 95¢; Spark Plugs, No. T-8, Each 70¢.

(TURN TO PAGE 268, PLEASE)

Maintenance Manuals

Continued from Page 267

Education Department, Electric Auto-Lite Co., Toledo 1, Ohio.

Auto-Lite Sta-Ful Batteries, No. BD-551—Maintenance, care and operation of Auto-Lite Sta-Ful batteries. Free—address as above.

How to Increase Battery Life in Commercial Service, No. BD-669—Tips on battery care and operation. Free—address as above.

Servicing Auto-Lite Generator Regulators, No. SD-123—62 pages—Describes and illustrates service, operation and maintenance of Auto-Lite generator regulators. Each 25¢—address as above.

The Storage Battery, No. 4250—Describes service, operation and maintenance on Exide batteries. Free—Advertising Dept., Electric Storage Battery Co., 42 South 15th St., Philadelphia, Pa.

Motor Coach Service, No. 2924—Tips on operation, service and maintenance of batteries in motor coach service. Free—address as above.

Alternator System Operation and Test Procedures, Training Manual No. 6—13 pages—Covers operation and testing of Leece-Neville alternator systems. Free — Technical Service Dept., Leece-Neville Co., 5109 Hamilton Ave., Cleveland 14, Ohio.

Battery Service Manual — Covers maintenance, operation and care of Prest-O-Lite batteries. Free—Sales Dept., Prest-O-Lite Battery Co., P.O. Box 931, Toledo 1, Ohio.

The Whys and Hows of Voltage Regulators—Describes operation of Blue Streak voltage regulators. Free—Standard Motor Products, Inc., 37-18 Northern Blvd., Long Island City 1, N. Y.

Engines

Burd Handy Handbook—48 pages—Pocket-size handbook outlining operation and maintenance of the carburetor, ignition parts and timing, cooling system, bearings and oiling system, valves, cylinder head and walls, and pistons and piston rings. Free—Sales Dept., Burd Piston Ring Co., Rockford, Ill.

Practical Pointers on Engine Maintenance—31 pages—Review of internal combustion engine operation and trouble-shooting guide to the more common causes of troublesome operation. Free—Ethyl Corp., 100 Park Ave. Bldg., Park Ave. at 41st St., New York 17, N. Y.

Thompson Repair and Tune-Up Manual, Vol. 2, Trucks, Buses, Tractors, Diesel Engines, Etc.—514 pages—A how-to-do-it manual covering operations necessary in engine repair and tune-up. Each $2.50 — Service Division, Thompson Products, Inc., 2209 Ashland Rd., Cleveland 3, Ohio.

Pedrick Engine Repair Manual—170 pages—Covers general procedure for general repair and tune-up of all engines, passenger car engines, and truck and bus engines. Each $2.25 plus 50¢ per year for supplementary bulletin service to signers of Pedrick Fleet Agreements. For information—Advertising and Sales Promotion Dept., Wilkening Mfg. Co., 2000 South 71st St., Philadelphia 42, Pa.

Modern Preventive Maintenance for Gasoline and Diesel Trucks—32 pages—Complete outline of preventive maintenance program for truck engine, transmission, brakes and wheels. Can be adapted for most operations. Free—GMC Truck and Coach Division, General Motors Corp., Pontiac, Mich.

Dayton Fan Belt Service Manual, No. A-951—Describe service and adjustment of engine fan belts. Free—Advertising Dept., Dayton Rubber Co., 2342 West Riverview Ave., Dayton 1, Ohio.

General Operation and Service of Automotive Pulley and Belt Drives, Service Bulletin No. 1006—Data on operation and service, including trouble-shooting, on engine fan belts.

(TURN TO PAGE 270, PLEASE)

620,000 TOUGH MILES A MONTH

C. H. Crutcher, Operating Manager, keeps his finger on the vast operation of Healzer Cartage Company from his office in Kansas City, Missouri.

CASE HISTORY

Healzer Cartage Company's 56 over-the-road tractor units and 55 city pick-ups cover the greater part of the Mid-West, hauling general commodities.

In an operation of this size, a motor oil must be an all-around good oil to do an all-around good job. Healzer Cartage began using Phillips 66 Heavy Duty Motor Oils in all their equipment four years ago.

The records speak for themselves:

WEAR: .003 to .005 per 100,000 miles
Sludge & Varnish: Negligible
Bearings: No trouble
Fouling: None
Oil Consumption: 128 miles per quart—includes oil changes every 2,000 miles.

From these results you can see why Healzer Cartage is well satisfied with Phillips 66 Heavy Duty Motor Oil. It can do as much for you!

Here's one of the 56 over-the-road tractor units protected by Phillips 66 Heavy Duty Motor Oils.

Set up your own test. A Phillips 66 Lubrication Engineer will be glad to help you plan it without obligation. Write to: Sales Department, Phillips Petroleum Company, Bartlesville, Oklahoma.

Oil for the Engines of Commerce

Phillips 66

PHILLIPS 66 HEAVY DUTY MOTOR OIL

Maintenance Manuals

Continued from Page 268

Free—Technical Service Dept., Leece-Neville Co., 5109 Hamilton Ave., Cleveland 14, Ohio.

How to Hone Cylinders—Instructions on cylinder honing. Free—Sales Dept., Lisle Corp., Clarinda, Ohio.

Fits and Finishes — Discussion of maintenance and operation of piston pins and cylinders. Free—Advertising Dept., Sunnen Products Co., 7910 Manchester Ave., St. Louis 17, Mo.

Hastings Piston Ring Handbook—Describes maintenance, care and operation of piston rings. Includes illustrations of various types. Free—Hastings Mfg. Co., Hastings, Mich.

Service Manual for the Doctor of Motors—90 pages—Complete book on piston ring service and maintenance. Includes data on cylinder, carburetor and other engine troubles affecting piston rings. Free—Advertising Services Dept., Perfect Circle Corp., Hagerstown, Ind.

The Automotive Engine Piston—Covers operation and construction of automotive aluminum pistons. Free—Advertising Dept., Aluminum Industries, Inc., Cincinnati 25, Ohio.

The Automotive Engine Valve — Data on automotive engine valve operation, construction and maintenance. Free—address as above.

The Principles of Valve Reconditioning—Covers valve reconditioning —Free—Advertising Dept., Black and Decker Mfg. Co., Towson 4, Md.

Valve Service Manual, No. 253—Procedure for servicing valves with K-D valve surfacing tools. Free—Sales Dept., K-D Mfg. Co., Lancaster, Pa.

A Good Valve Job Pays—23 pages —Information on valve servicing, checking and installation. Free — Ethyl Corp., 100 Park Ave. Bldg., Park Ave. at 41st St., New York 17, N. Y.

Engine Bearing Service Manual—109 pages—Complete review of engine bearing operation, types, design characteristics, tools used in installation, procedure in replacing, and trouble-shootng. Contains a complete review of engine operation in relation to bearing wear. Each $1.00—Advertising and Sales Promotion Dept., Federal-Mogul Service, 11031 Shoemaker, Detroit 13, Mich.

Johnson Automotive Bearing Manual—97 pages—Complete review of removal, installation and maintenance of engine bearings. Fully illustrated to provide information on trouble-shooting, lubrication, and different types of bearings. Includes description of checking bearings and other engine parts affecting the bearings. Each $1.00—Johnson Bronze Co., New Castle, Pa.

Automotive Engine Bearings, Lubrication Magazine, May, 1953 — Trouble-shooting discussion on automotive engine bearings with special emphasis on lubrication of the bearing and other engine parts to reduce bearing wear. Free — Advertising Division, Sales Dept., The Texas Co., 135 East 42nd St., New York 17, N. Y.

Fuel Systems

Fuel Pump Shop Manual, No. A-1919—Information on operation and repair of the fuel pump, including combination fuel and vacuum pumps. Includes testing, trouble-shooting and overhauling. Free—Advertising Dept., AC Spark Plug Division, General Motors Corp., 1300 North Dort Highway, Flint 2, Mich.

Fuel Pump Service Manual — 16 pages — Covers service, operation, checking, maintenance and testing of Hygrade fuel pumps. Free—Advertising Dept., Hygrade Products Division, Standard Motor Products, Inc., 37-18 Northern Blvd., Long Island City 1, N. Y.

Butane-Propane Power Manual — 334 pages—Full discussion of propane-butane powered engines. Covers carburetion, timing, pressure, igni-

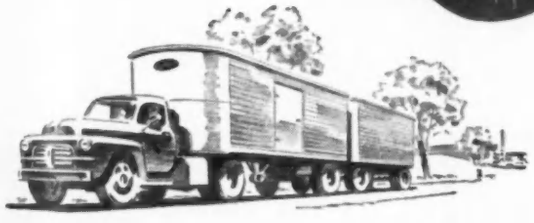
(TURN TO PAGE 272, PLEASE)

Eaton 2-Speed Truck Axles

POWER WHEN NEEDED, SPEED WHEN WANTED

MORE AND QUICKER FULL-LOAD TRIPS

LOWER OPERATING AND MAINTENANCE COSTS



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Maintenance Manuals

Continued from Page 270

tion, fuel tanks, storage tanks, safety, conversions and other LP gas questions. Each $3.50—Butane-Propane News, 198 South Alvarado St., Los Angeles 4, Cal.

Fleet Owner Data Book—Maintenance and operation of various models of Holley carburetors. When requesting, specify make and model of vehicle and carburetor. Each $1.00—Education Dept., Holley Carburetor Co., Detroit 4, Mich.

Student Data Book—Basic text on carbureton theory and review of operation of Holly carburetors. Each $1.50—address as above.

Engine Principles and Automotive Tune-Up Fundamentals — Complete textbook covering internal combustion engine ignition, compression, timing and carburetion. Includes maintenance, service, adjustment and operation data. Each $2.00—address as above.

Operation and Maintenance Manual, Rochester Carburetors—over 100 pages—Includes theory of carburetion, as well as operation, maintenance, service, adjustment, inspection and assembly of Rochester carburetors. Each $1.50—United Motors Service, 3044 West Grand Blvd., Detroit 2, Mich.

American Bosch Fuel Injection Equipment Maintenance Information, Form No. 3465—50 pages—Describes maintenance, service and operation of American Bosch fuel injection pumps, fuel supply pumps, mechanical and pneumatic governors, nozzles and nozzle holders and fuel oil filters. Fully illustrated. Each 25¢—Advertising Dept., American Bosch Corp., Springfield 7, Mass.

Lanova Combustion System for Diesels—Covers service, maintenance and operation of the Lanova combustion system for diesels. Free—Lanova Corp., 38-15 30th St., Long Island City 1, N. Y.

Fuels, Lubrication

The Modern Bus and Truck, Fuels and Lubricants, Parts 1 and 2, Lubrication Magazine, August and September, 1952—Discussion of characteristics of modern fuels and lubricants for today's trucks and buses. Included are sections on desirable characteristics in various fuels and lubricants as well as many trouble-shooting tips. Free — Advertising Division, Sales Dept., The Texas Co., 135 East 42nd St., New York 17, N. Y.

Modern Automotive Engine Oils, Lubrication Magazine, January, 1952—Reviews the operation and effects of engine oil lubricants, including detergent oils and additive agents. Free—address as above.

Some Problems Associated with Lubrication of Large Engines, Lubrication Magazine, November, 1952—Discusses several problems that arise in the operation of larger diesel engines and suggests how they may be corrected. Free—address as above.

Approved Lubrication for Trucks with Bus and Coach Recommendations—109 pages—Data on lubrication requirements of a majority of trucks. In addition to the lubrication specifications, it includes how-to-do-it information on servicing the vehicle. Each $18.00—Sales Dept., The Chek-Chart Corp., 31-33 East Congress Parkway, Chicago 5, Ill.

Service Man's Guide to Automotive Lubrication—Tips on lubrication servicing mainly for passenger cars. Each $4.00—address as above.

The How and Why of Automotive Lubrication—This set of six booklets covers lubricaton of engines and engine accessories, transmissions, drive line and differential, springs, brakes, wheels, body units and chassis, automatic transmissions and other component parts. Each set of six $4.50—address as above.

Diesel Engine Lubrication — Discusses maintenance of diesel engines

(TURN TO PAGE 274, PLEASE)

Maintenance Manuals

Continued from Page 272

from lubrication standpoint. Includes trouble-shooting tips. Free — Sales Dept., Cities Service Oil Co., 70 Pine St., New York 5, N. Y.

Diesel Engines—Fuels and Lubricants—Covers fuels and lubricants for diesel engines. Contains maintenance, service and trouble-shooting tips. Free—Sales Dept., Sinclair Refining Co., 600 Fifth Ave., New York 20, N. Y.

Tires

How to Get Extra Service out of Truck Tires—24 pages—Covers overload troubles, over and underinflation, tread wear, heating, tubes, matching of duals, and driving for tire conservation. Fully illustrated to aid in truck tire maintenance. Free—Rubber Manufacturers Assn., 444 Madison Ave., New York 22, N. Y.

How to Get Extra Service out of Automobile Tires—30 pages—Covers about the same data as the above booklet with emphasis on passenger car and similar size tires. Information is more detailed and presented more simply. Free—address as above.

How to Rotate Truck Tires and Get Extra Service—4 pages—Summary of how to systematically rotate truck tires including data on matching of tires on dual wheels. Free—address as above.

How to Get Extra Service out of Solid Industrial Tires—8 pages—Review of maintenance and service for solid rubber tires used on materials handling equipment. Free—address as above.

Firestone Data Book for Trucks, Trailers, Passenger Cars and Industrial Vehicles, No. 2-C-817—Includes tire care, maintenance and service data, such as a special trouble-shooting section, instructions for determining tire loads, how-to-figure tire cost per mile, and determining dual wheel spacing and clearance. Free—Advertising Dept., Firestone Tire and Rubber Co., Akron 17, Ohio.

Nine Ways to Get More Miles out of Your Truck Tires—8 pages—Review of tire selection, tube care, dual matching and spacing, alignment, rotation, inflation, load distribution, recapping and repair, and driving habits. Free—Sales Dept., B. F. Goodrich Co., Akron, Ohio.

How to Get More Recaps out of Your Truck Tires—8 pages — Describes cost savings, recapping processes, rotation, tire care, and suggestions on when to recap. Free—address as above.

How to Cut Truck Tire Costs — Covers service, maintenance and care of truck tires. Free—Advertising Dept., Goodyear Tire and Rubber Co., Akron 16, Ohio.

Tools, Equipment

Polisher Use and Care Handbook—How-to-do-it manual on portable, electric polishers. Free—Advertising Dept., Black and Decker Mfg. Co., Towson 4, Md.

Sander Use and Care Handbook—How-to-do-it manual on portable, electric sanders. Free—address as above.

Drill Use and Care Handbook — How-to-do-it manual on portable electric drills. Free—address as above.

Drill Engineering Data—Information on drill selection and training instructions on drilling. Free—Ampco Twist Drill Division, Greenfield Tap and Die Corp., Greenfield, Mass.

The Use and Care of Twist Drills —Instructions on use of twist drills. Free—Cleveland Twist Drill Co., 1242 East 49th St., Cleveland 14, Ohio.

Files, How to Select, Use and Conserve Them — 28 pages — Describes various types of files, how to use them, and their care. Each 10¢—Advertising Dept., Delta File Works, James and Buckius Sts., Philadelphia 37, Pa.

Compressing the Facts about Compressed Air—Data on service and maintenance of air compressing

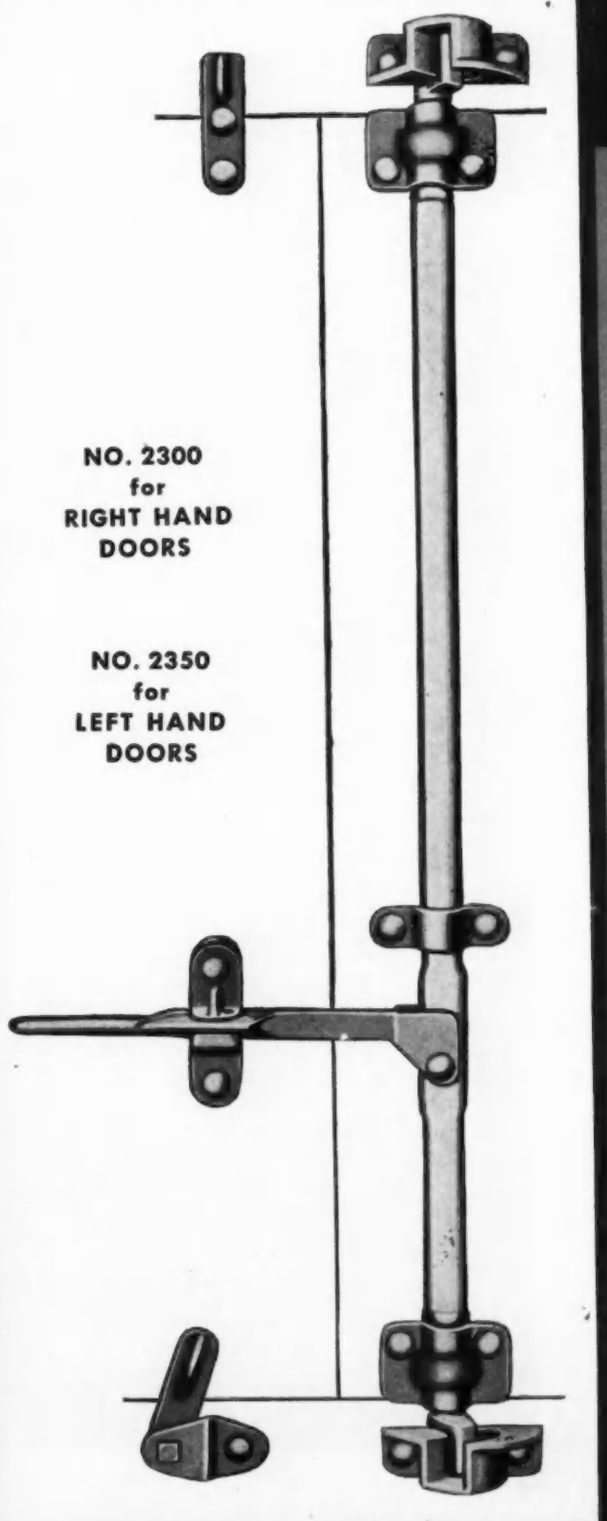
(TURN TO PAGE 276, PLEASE)

MINER TUBULAR BAR TYPE *Door Fasteners*

DROP-FORGED!

FOR TRUCK AND TRAILER BODIES

The Miner Truck Door Fastener, No. 2300, is applicable to all sizes of rear and side doors, either single or double, and is particularly desirable for refrigerator bodies. The highly dependable features of the Miner Bar Type Fastener which have always been widely accepted by the truck builders and operators have been retained in this new fastener. Refinements in the component parts have been accomplished by the drop-forging process, which permits the use of special carbon steels of unusual hardness in texture and vastly stronger and denser than the malleable iron product, thereby guaranteeing longer endurance in a service that demands reliability of operation. The vertical locking bar of scientifically designed oval section has the rigidity and torsional strength necessary to withstand the rugged operating conditions which exist at loading platforms.



NO. 2300
for
RIGHT HAND
DOORS

NO. 2350
for
LEFT HAND
DOORS

W. H. MINER, INC.
CHICAGO

Maintenance Manuals

Continued from Page 274

equipment. Free—Brunner Mfg. Co., Utica 1, N. Y.

Selecting an Air Compressor—Information on how to select an air compressor together with maintenance and service data. Free—Sales Dept., DeVilbiss Co., Toledo 1, Ohio.

Making the Most of the Spray Painting Method—32 pages—Illustrated information on how-to-do spray painting together with instructions on proper care of equipment. Free—address as above.

Hot Spray Application of Automotive Finishes—Summary of information on hot spray painting. Free—Automotive Division, Sherwin-Williams Co., 101 Prospect Ave., N.W., Cleveland, Ohio.

Truck and Car Fleet Maintenance and Repair Welding Manual — 56 pages—Covers almost all welding operations in fleet maintenance. Free—Eutectic Welding Alloys Corp., 40-40 172nd St., Flushing, N. Y.

Weldability of Metals — Data on welding of different metals. Each 50¢—Lincoln Electric Co., 22801 St. Clair Ave., Cleveland 17, Ohio.

New Lessons in Arc Welding—328 pages—Training manual covering arc welding technique. Each $1.00—address as above.

Welding Precautions and Safe Practices—Information on welding technique with emphasis on safety in welding. Free—Linde Air Products Co., 30 East 42nd St., New York 17, N. Y.

Guide to Better Welding—Explanation of welding techniques. Free—Sales Dept., Marquette Mfg. Co., 307 East Hennepin Ave., Minneapolis 14, Minn.

Truck and Bus Cleaning Manual—Information on cleaning of both vehicle exteriors and vehicle parts and components. Free—Advertsing Dept., Magnus Chemical Co., Garwood, N. J.

Some Good Things to Know about Metal Cleaning—40 pages—Review of metal cleaning processes including many automotive applications. Free—Oakite Products, Inc., 19 Rector St., New York 6, N. Y.

How to Run a Lathe—128 pages—Training manual on care and operation of a metal working lathe. Each 50¢—Advertising Dept., South Bend Lathe Works, South Bend 22, Ind.

How to Run a Drill Press—31 pages Information on various drilling methods. Each 25¢—address as above.

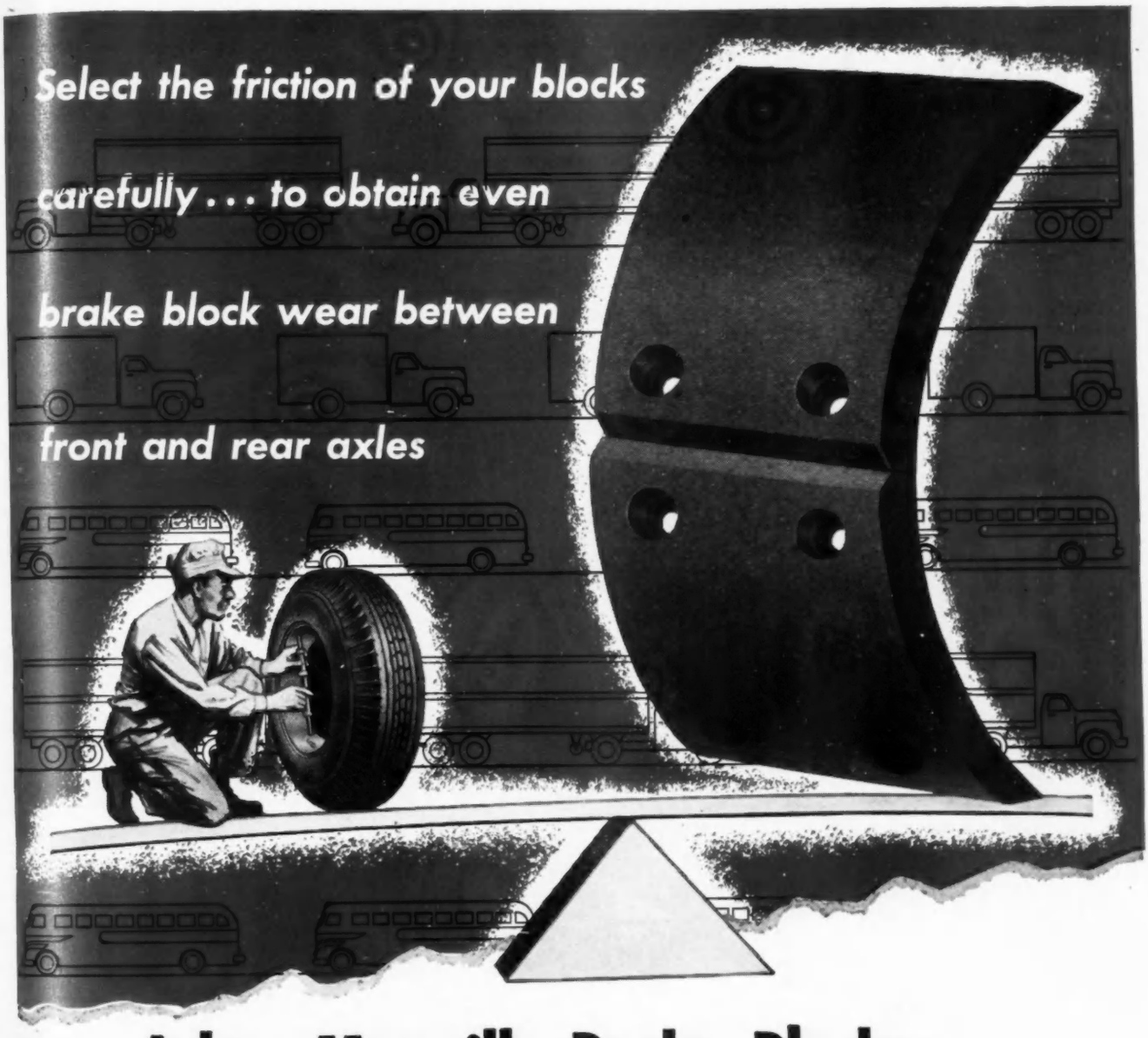
How to Run a Metal Working Shaper—32 pages—Information on how-to-do various metal shaping operations. Each 25¢—address as above.

END

Please Resume Reading Page 148

Timken's Octo X Quad

This all-new type truck, called the "Octo X Quad," was produced as an experimental model by Timken-Detroit Axle Division, Rockwell Spring and Axle Co., Detroit. The principles used in its construction can be adapted for other commercial bodies. With the improved weight distribution of the "Octo X Quad," an operator can carry a load of 50,000 to 55,000 lb GVW. It incorporates such features as hydraulically-operated power steering, and power brakes. It is a cab-over-engine design with steering on both the two front axles. GVW distribution is 32,000 lb on the rear tandem and 18,000 lb on the front tandem. Front axles are Timken No. FD-900, or No. FE-900 which are both standard and high production models.



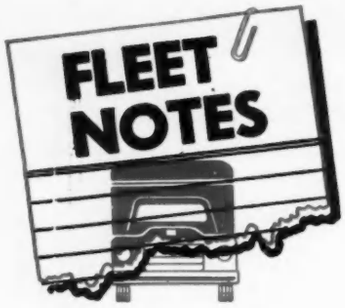
Johns-Manville Brake Blocks . . .

give you top performance at lowest cost per mile

To meet the widest possible range of braking conditions, Johns-Manville Brake Blocks are supplied in individual units, or combination sets of high, medium or low frictional characteristics. This flexibility permits custom engineering for every type of brake to meet every type of condition encountered in the operation of bus and truck fleets.

To bus and truck operators, this means lower brake cost per mile, smoother stops, minimum shop and out-of-service time. Most of all, it means *dependability under all driving conditions.* If you would like more information on Johns-Manville Brake Blocks, write Automotive Division, Johns-Manville, Box 60, New York 16, N. Y. In Canada, 199 Bay St., Toronto.

Johns-Manville *asbestos* **FRICTION MATERIALS**



Pacific Intermountain Express Co., Oakland, Cal., reports gross revenue of $22,352,492 for 1953 as compared to $20,617,465 in 1952. Net income in 1953 was $1,206,364 as compared to $1,121,002 in 1952.

Mason and Dixon Lines, Inc., Kingsport, Tenn., has announced opening of a sales office in Birmingham, Ala.

Badger Freightways, Inc., is the new name of **Cherryland Transport.** Main offices have been moved from Sturgeon Bay to Sheboygan, Wis.

J. A. Garvey Transportation, Inc., Boston, Mass., has moved into its new terminal in Dorchester, Mass.

St. Johnsbury Trucking Co., St. Johnsbury, Vt., opened last month its completely modernized home office.

Mueller Transportation Co., Chicago, has put into operation a new terminal in that city, featuring 16 center dock doors and a 60-ft wide dock.

J. W. Cartage Co., Milwaukee, Wis., for the fifth consecutive year has been given the first place safety award for Wisconsin fleets in its class for its 1953 safety record.

P. B. Mutrie Motor Transportation, Inc., Boston, Mass., celebrates its 65th anniversary this year.

St. Johnsbury Trucking Co., St. Johnsbury, Vt., has announced plans to distribute a bonus of over $50,000. Distribution will be on a percentage basis in relation to salary.

Union Freightways Co., Omaha, Nebr., celebrates its 45th anniversary this year.

American Red Ball Transit, Inc., held its fifth annual convention in Atlanta, Ga., last month. Over 150 agents attended the 3-day meeting.

H. P. Welch Co., Somerville, Mass., celebrates its 50th anniversary this year.

Royal Transit, Inc., Milwaukee, Wis., has purchased **Rockford Motor Service,** Rockford, Ill. Purchase price was reported at more than $100,000.

Watson Bros. Transportation Co., Omaha, Nebr., has set up a perishables hauling division. Main office of the new division will be at company headquarters in Omaha, with a west coast office in Los Angeles, Cal.

Roadway Express, Inc., Akron, has purchased about $1,750,000 worth of Mack diesel tractors. They will be used with 35-ft trailers and were selected after being tested by Roadway in actual operation.

Gilbert Carrier Corp., New York City, opened last month its new terminal especially designed to handle wearing apparel on hangers. It features an overhead pipe rack system to permit about 500,000 garments a day to be hung, inspected, sorted and loaded. The fleet expects to add 13 cities in the states of Ohio, Mo., Minn., Mich. and Ill. to the points it serves in the near future. The new terminal cost about $300,000.

Pacific Intermountain Express, Oakland, Cal., announced last month that over 1 million people have seen its 24-min. color film describing the fleet's operation since it was released in Sept. 1952.

Consolidated Freightways, Portland, Ore., celebrates its 25th anniversary this year.

Cal-Central Trucking Co., Inc., Sacramento, Cal., has plans to open a terminal in San Francisco.

Bekins Van and Storage Co. has sponsored for the past six years a musical radio show on the Pacific Coast network of the Columbia Broadcasting System.

(TURN TO PAGE 280, PLEASE)

50 YEARS OF SPECIALIZING GIVE DITZLER ITS EXCLUSIVE

KNOW-HOW

DITZLER RIP-RAP OFFERS YOU THESE 3 GREAT FEATURES

1. Unusually high solid content with more film-forming materials gives maximum filling—fewer coats are needed.

2. Unequalled adhesion contributes to durability of finish and keeps paint jobs looking better longer.

3. Superior hold-out assures the uniform appearance and maximum lustre of finishing coat.

Available in dark gray, neutral gray, red oxide and white.

EVERY DITZLER PRODUCT is the best that more than half a century devoted exclusively to the making of fine automotive finishes can produce.

● Ditzler began by making fine japan colors for carriages. These finishes were used on many of the earliest automobiles. As these vehicles evolved into the modern motorcar, Ditzler contributed to its improvement by developing and perfecting more attractive and longer-lived finishes. These coatings are now used in varying quantities by most of today's manufacturers of motor cars, trucks and buses. This acceptance was earned the hard way—by consistently *dependable performance.*

● Today, Ditzler's complete line includes everything needed to make an automotive vehicle look better longer. That's why so many paint shops use Ditzler Finishes exclusively. They know these superior finishes do the job more efficiently, more economically and with greater satisfaction to the car owner.

DITZLER COLOR DIVISION, PITTSBURGH PLATE GLASS COMPANY
Detroit 4, Michigan

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PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

Fleet Notes

Continued from Page 278

Closing announcement tells about some phase of the trucking industry's service to the nation.

Ward Trucking Corp., Altoona, Pa., has put into service terminal facilities in Chambersburg, Pa. It will connect several points in Fulton county with the fleet's services.

Riss and Co., Inc., Kansas City, Mo., has announced purchase of 500 diesel-engine tractors from GMC Truck and Coach Division, General Motors Corp. The fleet reports they will be used on more than 40,000 miles of routes from Denver, Col., to Boston, Mass., and from Detroit to Fort Worth, Texas.

Acme Fast Freight, Inc., New York City, has opened its new terminal in Atlanta, Ga. With space for 26 trucks and 22,400 sq ft of floor area, it has been especially designed for handling of ltl freight.

Speedway Carriers, Inc., Selinsgrove, Pa., has moved its home office from Schuylkill Haven, Pa., to its new terminal on route 15 between Sunbury and Selinsgrove.

Kulp and Gordon, Inc., Phoenixville, Pa., has acquired **Cook's Express**, Norristown, Pa.

Pilot Freight Carriers, Inc., Winston-Salem, N. C., has made a $4000 grant to the School of Business Administration, University of North Carolina, Chapel Hill. It will be used for research into the motor freight industry.

Tarbett Trucking, Inc., Muncie, Ind., has announced plans for a new terminal in Buffalo, N. Y. Construction is expected to begin the end of this month.

Atlanta-New Orleans Motor Freight Co., New Orleans, La., expects to finish construction of a new administrative and garage building in that city about the 20th of this month.

Consolidated Copperstate Lines, Los Angeles, Cal., has ICC Division 4 authorization to acquire control of **Valley Motor Lines, Inc., Valley Express Co., United Motor Transport Lines, Inc.**, and **Terminal Warehouse Co.**, all of Fresno, Cal.

West Coast Fast Freight, Los Angeles, Cal., has just finished a training and public relations film on long-haul truck transportation. It will be sold through regular trade channels for classroom instruction, says the announcement.

Johnson Motor Lines, Inc., Charlotte, N. C., has inaugurated a medical care program for its employees to be conducted by the safety and personnel clinic of the company at no expense to the employees.

Spector Motor Service, Chicago, has paid $77,000 in bonus to 700 employees for the year 1953. All employees with one year of service as of December 31, 1953, shared in the "pot."

T.I.M.E., Inc., Montebello, Cal., has installed two-way radios in its pick-up and delivery trucks in the Los Angeles area.

Highway Express Lines, Inc., Philadelphia, has put into service its 100th Reo truck since the end of World War II.

Allied Van Lines, Inc., Broadview, Ill., just completed its annual regional and district sales managers meeting. Plans were announced to spend approximately $3 million a year for the next three years.

M and M Transportation, Somerville, Mass., is sponsoring a traffic safety essay contest for junior and senior high school students in Boston, Mass., schools. Prize is a $500 college scholarship or $500 cash.

Pilot Freight Carriers, Inc., Winston-Salem, N. C., has announced a $4,000 grant to the University of North Carolina's School of Business Administration for research in motor freight transportation. The grant was made by the Pilot Freight Carriers Foundation.

Associated Transport, New York City, has consolidated its two offices at 1740 and 1755 Broadway into one new headquarters at 380 Madison Ave. in that city.

FACTORY FLASHES

White Motor Co., Cleveland, Ohio, held formal opening of its new $600,000 model sales and service headquarters in that city. The shop section of the new building will handle 60 trucks under roof at one time.

Goodyear Tire and Rubber Co., Akron, Ohio, has been presented with American Trucking Assn. special citation for their "leading role in the nation-wide campaign for better roads."

Lee Tire and Rubber Co., Conshohocken, Pa., has moved its Cincinnati, Ohio, branch to 1569 Harrison Ave. in that city.

Eaton Mfg. Co., Cleveland, Ohio, has acquired all the common stock of **Spring Perch Co.**, Lackawanna, N. Y. It will continue operation as a subsidiary of Eaton with F. I. Goodrich as president.

Armstrong Tire and Rubber Co., Natchez, Miss., has been awarded the Reconstruction Finance Corporation's contract for RFC's 1954 tire testing program. Five cars, nine trucks and a staff of 45 will test tires from various tire companies made of experimental compounds for tread wear, body durability, and overall performance.

Reynolds Metals Co., Louisville, Ky., now has its new aluminum reduction plant, located near Arkadelphia, Ark., in operation. Costing an estimated $34 million, it has a rated capacity of 110 million pounds of aluminum a year.

Mack Trucks, Inc., New York City, has announced movement of its Salt Lake City, Utah, sales and service office to 704 South Third West St. in that city.

International Harvester Co., Chicago, opened, March 1, a new motor truck district sales office in Lubbock, Texas. It will be located in the Stanolind Bldg.

Black and Decker Mfg. Corp., Towson, Md., has completed a $2 million addition to its Hampstead, Md., plant, more than doubling the original size. It covers 126,000 sq. ft.

International Harvester Co., Chicago, reports 1953 earnings of $52 million.

Allen B. Du Mont Laboratories, Inc., Clifton, N. J., is presently organizing a national sales operation for its fleet mobile radio equipment.

Gould-National Batteries, Inc., will build a new $1 million battery plant on a

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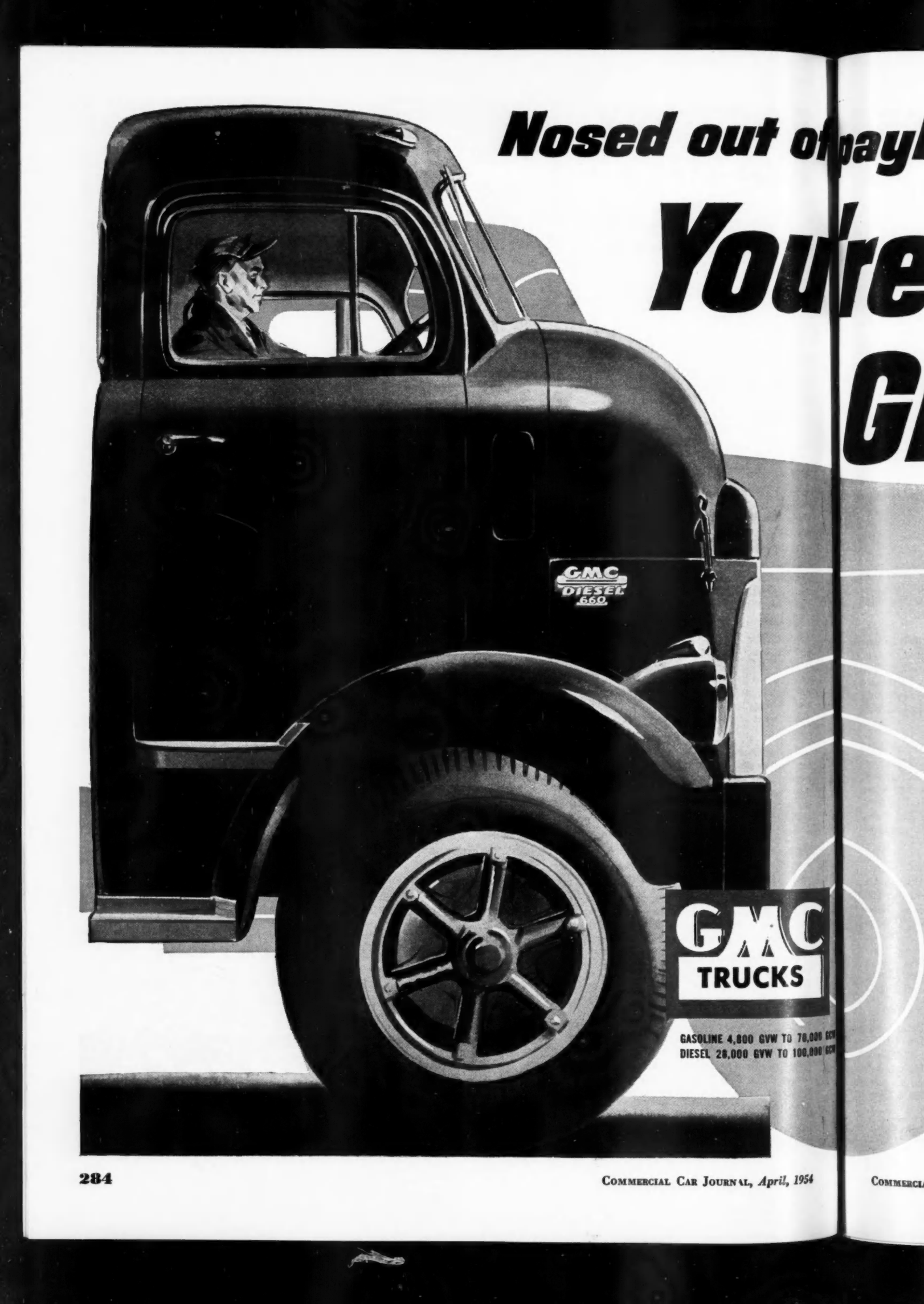

Nosed out of payl
You're
GM
GMC
DIESEL
660
GMC
TRUCKS
GASOLINE 4,800 GVW TO 70,000 GCW
DIESEL 28,000 GVW TO 100,000 GCW

t of payload?

u're in with GMC c.o.e.'s!

LOOK at the conventional tractor. Up to three feet of hood nosing you out of payload! That's a big chunk of *any* legal length limit.

Then look at the new GMC c.o.e. Just 72 inches from bumper to back-of-cab. Think of all the extra payload that lets you carry—on every trip.

Even the 96-inch sleeper model, with its comfortable bunk, handles a 35-foot "square-nose" without stretching the law. And that doesn't cut in on ample clearance for close-quarter maneuvering.

What's more, you can have either *2-cycle* Diesel power with its operating economy – or one of GMC's cost-cutting gasoline engines. There's a choice of ten wheelbases in the 30,000 GVW-65,000 GCW range. And you have either single or tandem axle models.

So see your GMC dealer. Find out all the other features that rate these GMC c.o.e.'s the top trucks in *any* hauling operation.

GMC Truck & Coach Division of General Motors

Get a modern truck!

Be careful – drive safely

Factory Flashes

Continued from Page 283

20-acre site in Antioch, Cal. Production is expected about the middle of the year.

Dodge Division, Chrysler Corp., Detroit, has announced organization of the 23rd and 24th truck regions in Dodge's national truck sales set-up. The new Jacksonville, Fla., region covers that state, southern Georgia and southeastern Alabama. The new Denver, Col., region covers that state, Utah and portions of New Mexico, Wyoming, Montana, Idaho, Nevada and Arizona.

GMC Truck and Coach Division, General Motors Corp., Pontiac, Mich., announces that **Frantz GMC Truck Co.** has purchased all GMC retail facilities in Philadelphia and will handle all GMC sales and service in the area.

Twin Coach Co., Kent, Ohio, President L. J. Fageol has predicted that normal replacements of city type vehicles alone should provide a ready market for approximately 3500 buses in 1954.

Fruehauf Trailer Co., Detroit, sales last year reached a record high of $193,592,531, an 18.9 per cent increase over 1952. Net earnings, after federal income taxes, in 1953 were $6,950,344 as compared ot $5,711,525 in 1952.

Trailmobile, Inc., Cincinnati, Ohio, has announced establishment of a new factory branch in Albany, N. Y.

Mack Trucks, Inc., New York City, and its subsidiary companies, reported net sales of $173,142,849 for 1953 as compared to $170,534,622 in 1952. Net income after taxes in 1953 was $2,553,393 and in 1952 was $1,048,718.

Clark Equipment Co., Buchanan, Mich., has announced plans to erect a new plant on the outskirts of Benton Harbor, Mich. Construction will start at once and it is expected to be in operation before the end of this year.

Hobbs Mfg. Co., Fort Worth, Texas, has set up a second assembly line to double production facilities on aluminum van trailers. The line extends the length of two city blocks.

Coleman Motors Corp. has moved its entire operation to Littleton, Colo., near Denver. The name of the company will be changed to **The American Coleman Co.**

St. Paul Hydraulic Hoist, Mattoon, Ill., has appointed **Timpte Brothers, Inc.,** Denver, Colo., distributor for Colo., most of Wyo. and N.M.

L. A. Young Spring and Wire Corp., Detroit, has announced purchase of **Daybrook Hydraulic Corp.,** Bowling Green and Upper Sandusky, Ohio. Operation will continue as the **Daybrook Hydraulic Division, L. A. Young Spring and Wire Corp.**

White Motor Co., Cleveland, Ohio, sales in 1953 totalled $167,384,914, highest in the company's history and 12.7 greater than 1952. Included in this figure are sales of the company's **Autocar Division.** Net income, after all charges and taxes, reached $5,015,367 in 1953 as compared with $3,447,503 in 1952.

Vapor Heating Corp., and its subsidiary, **Roth Mfg. Co.,** have opened a new plant at 6420 West Howard St., Chicago 31, Ill. Executive and sales offices remain at 80 East Jackson Blvd., Chicago 4, Ill.

Fuller Mfg. Co., Kalamazoo, Mich., has acquired **Shuler Axle Co.,** Louisville, Ky. Shuler continues operation as a wholly owned subsidiary.

General Motors Corp., Detroit, reported 1953 civilian sales of over $8 billion and defense sales of almost $2 billion. Net sales in 1952 totaled $7½ billion. Net income in 1953 was $598 million as compared to 1952 net income of $559 million.

FAMOUS LAST WORDS: YOU DRIVE, YOU'RE TOO DRUNK TO SING.

CEMCO
TRAILER JOCKEYS

Now you can rent them!

Nothing finer for speedy spotting of trailers at terminals!

The nation's leading truckers are using them — and reordering! Cuts trailer spotting time by 80% over the conventional hand-cranking set-up.

A CEMCO gives you 37,500 pounds of hydraulic lifting power at the center line of the fifth wheel. (1) Back under the parked trailer, (2) Apply the power (without even leaving cab), (3) Up goes the trailer, clearing the landing gear, (4) Away to a new location, and (5) let the trailer down gently, then unlock 5th wheel from trailer (driver still stays in cab)—the whole job completed in a matter of minutes.

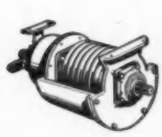
RENTAL PLAN . . .

A simple, attractive rental plan is available. In most cases the savings alone will pay the rent. Rental payments can apply towards the purchase price if you wish. Write for details — and Trailer Jockey specifications.

Cemco
Industries, Inc.
GALION, OHIO, U.S.A.

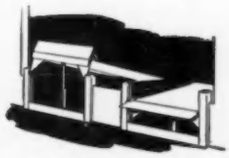
BULK CEMENT HAULER

MOBILE MACHINE SHOP



SPLIT-SHAFT POWER TAKE-OFF

HYDRAUL-LIFT TAILGATE



DOCK RAMP

FLEETMAN'S LIBRARY

An inert gas-shielded spot welding gun which welds from one side only and without need for back-up plates is described in brochure available from Air Reduction Sales Co., 60 East 42nd St., New York 17, N. Y., describing the company's "Aircospot" process and equipment.

Truck body insulating methods using "Ultralite" as the insulating material are published in a new bulletin you can get by writing Gustin-Bacon Mfg. Co., 210 West 10th St., Kansas City 6, Mo. Included are tips on handling perishable cargo and information on constructing insulated bodies.

Parts' shelves, bins and many other fabricated steel products for use in fleet shops and offices are listed in this catalog, No. 1200-R, available from Red Tiger Products, Inc., 20 North Wacker Drive, Chicago 6, Ill.

A one-piece folding, rear truck body door for closed units and a **split crossbow assembly** for open-top bodies are described in a new folder available from Truk-A-Door Co., 2457 Woodward Ave., Detroit 1, Mich.

Automotive electrical information is covered in a new series of manuals being produced by the Automotive Electric Assn., 16223 Meyers, Detroit 35, Mich. Volume No. 1 is ready at the present time. It covers fundamentals of electricity in automotive use. Subsequent volumes are planned on fuel systems and magneto ignition. Price is $1.00 for each volume.

A series of trailers are described in a group of recently published bulletins. Covered are cargo vans, insulated vans, livestock vans, bulk fruit and grain trailers, furniture vans and flat and rack trailers. For latest details on new developments in these models, write Kingham Trailer Co., Louisville, Ky., for further information on the models you would like to hear more about.

Interstate Commerce Commission reorganization as proposed by the Wolf Management Corp. is described in this booklet that includes the report of the management company, popularly referred to as the "Wolf Report." Copies are available at 75¢ each from Superintendent of Documents, Government Printing Office, Washington 25, D. C. Ask for Catalog No. Y 4.In8/3:In8/29.

Safety showmanship is the purpose of this newly available publication. "Showmanship in Safety" is a complete book on attention-getting stunts and gimmicks for emphasizing safety. It contains over 150 ideas for displays, demonstrations, stunts, awards and other interest-arousing devices all aimed at promoting safety. It is available from the National Safety Council, 425 North Michigan Ave., Chicago 11, Ill. It sells for $2.50 to non-Council members and for $1.25 to members of the Council.

Highway finance developments are reported in the book, "A Dynamic Highway Policy for the Future." It is a 92-page plus 11 pages of statistical material presentation of the proceedings at the recent U. S. Chamber of Commerce National Conference on Highway Financing. Fleet operators should be interested in adding

(TURN TO PAGE 290, PLEASE)

Fleetman's Library

Continued from Page 288

this summary of current thinking on highway finance to their reference library. Copies are $2.00 each from the Chamber of Commerce of the United States, 1615 H Street, N.W., Washington 6, D. C.

"Reciprocity—A Summary of the State Laws" outlines the reciprocity laws, and regulations of each state. It is available from American Trucking Assns., 1426 Sixteenth St., N.W., Washington 6, D. C., at $1.00 per copy.

Safety stickers for dashboards for use as continual reminders have been announced. The 4-color stickers come in sets of 12—one for each month of the year—and include such topics as near misses, day dreaming, turn signals, jumping the yellow and night driving. A free sample and prices for quantities can be obtained from the National Safety Council, 425 North Michigan Ave., Chicago 11, Ill.

Compressed air moisture control and the publisher's method of controlling it are described in a 4-page folder just published by Van Products Co., Erie 2, Pa.

Fire fighting equipment operation and effect are discussed in a series of bulletins just made available. Titles include: (1) Effect of packed dry chemical on operation of Ansul dry chemical fire extinguishers, (2) effect of Ansul dry chemical on electric motors and generators, (3) recommended fire protection of LP gas storage, unloading and handling areas, (4) nitrogen as an expelling agent for dry chemical fire extinguishers and (5) carbon dioxide cartridges. Ask for bulletins by title from Publications Manager, Ansul Chemical Co., Marinette, Wis.

Van trucks made by Fageol in 20 to 35 ft body lengths, 6 to 8 ft heights, and 713 to 1945 cu ft capacity are fully described in a new booklet available from International Harvester dealers or branches or by writing Twin Coach Co., Kent, Ohio.

Loading dock fenders are described in a new 12-page booklet available from The Goodyear Tire and Rubber Co., Inc., Dept. 722, Akron 16, Ohio.

Double disc, self-powered, automotive brakes are described in this pocket-size, booklet. Construction, operation and safety features of this new-type brake are covered. Write Auto Specialties Mfg. Co., St. Joseph, Mich., for a copy.

Traffic safety training film just produced by National Dairy Products is especially designed for both "big rig" and small delivery truck driver training. Information on how to obtain this film for showing can be obtained from National Dairy Products Corp., New York City.

"New Welding Procedures" is the title of a new color film giving a step-by-step description on welding rod and electrode welding techniques. Showings can be arranged by writing Eutectic Welding Alloys Corp., 40-40 172nd St., Flushing 58, N. Y.

Wheel balancing weight chart and weight removing tool for trucks and buses are available without charge from Snugl Wheel Weight Mfg. Co., 824 East Elm St., Kokomo, Ind.

Power tools made by Delta are fully described complete with photographs of the units in this 17 by 22-in. folder you can get by writing Delta Power Tool Division, Rockwell Mfg. Co., 400 North Lexington Ave., Pittsburgh 8, Pa.

Freight damage control equipment including web belt tie-downs, cargo nets, removable second-decks and pallet movers for trailers are described in a 4-page folder you can get by writing Brown-Line Corp., 341 North Foothill Rd., Beverly Hills, Cal.

Diesel specifications on units made by Harnischfeger are described in a new series of folders. Models from 20 to 138 hp and 2, 3, 4 and 6 cyl are included. For a set of these data sheets, write Diesel Division, Harnischfeger Corp., Crystal Lake, Ill.

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Every Industry Need

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W. V. Morgan Company, Sacramento
*Rankin Brothers, Lynwood
*Standard Auto-Body Co., Inc., Los Angeles

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*The Winter Weiss Company, Denver

CONNECTICUT
*Curran-Waring Equipment Co., Norwalk
Truck Equipment Company, Inc., Norwalk
†*Truck Industries, Inc., Greenwich

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FLORIDA
Miller Truck Equipment Company, Miami
*Rivers Body Factory, Jacksonville
Rivers Body Factory, Orlando
Rivers Body Factory, Tampa
*West Florida Equipment Co., Marianna

GEORGIA
Truck Equipment Company of Atlanta, Atlanta

IDAHO
The Lang Company, Boise

ILLINOIS
Auto Truck Equipment Sales, Chicago
Drake-Scruggs Equipment Co., Springfield
*Bill Montgomery Body & Trailer Mfgr., Salem
Nix Brothers, Olney
Scruggs-Drake Equipment Co., Decatur
*Voltz Brothers, Inc., Chicago
Truck Equipment Company, Peoria

INDIANA
Ernst Truck Equipment, Inc., Fort Wayne
Hallenberger, Inc., Evansville
*Southside Equipment Company, Indianapolis
Truck Engineering Co., Fort Wayne

IOWA
E. Cohn & Sons, Inc., Cedar Rapids
Pecaut Industrial Supply Company, Sioux City
Weston Dump Body Company, Des Moines

KANSAS
*Truck Parts and Equipment, Inc., Wichita

KENTUCKY
Oscar Crady Company, Inc., Louisville
Wilson Machinery & Supply Co., Inc., Lexington

LOUISIANA
*Dealers Truck Equipment Company, Shreveport
*Massart Tire and Supply, Lafayette
*Massart Tire and Supply, Lake Charles

MARYLAND
*Watson Automotive Equipment Company, Baltimore

MICHIGAN
Ashton Power Wrecker Equipment Co., Inc., Detroit
I. H. Gingrich and Sons, Inc., Grand Rapids
†Herthornway Export Corporation, Detroit
Swift All-Steel Body Co., Inc., Saginaw

MINNESOTA
Smith-Dunn, Inc., Duluth
Smith-Dunn Company, Inc., S. E. Minneapolis

MISSISSIPPI
*A. P. Lindsey, Distributor, Inc., Jackson

MISSOURI
The Ashton-Richards Company, Inc., Kansas City
The Ashton-Richards Co., Inc., St. Louis
Bailey Auto Body Company, St. Louis
Pitman Mfg. Co., Kansas City
Rothschild's Iron and Metal Works, Joplin

MONTANA
*Smith Equipment Company, Great Falls

NEBRASKA
Badger Body Manufacturing Co., Omaha
*Highway Equipment and Supply Co., Lincoln

NEW JERSEY
Adam Black & Sons, Inc., Jersey City
*Transportation Equipment Co., Inc., Newark

NEW MEXICO
M & F Equipment Company, Albuquerque
Watson Truck & Supply, Hobbs

NEW YORK
Binghamton-Heil Equipment Corp., Vestal
Franklin Body & Equipment Corporation, Brooklyn
*Maday Body and Equipment Corp. Buffalo
Maday Body and Equipment Corp., Rochester
Syracuse Auto Parts, Inc., Syracuse

NORTH CAROLINA
Ferree Motor & Equipment Co., Greensboro
*Mitchell Distributing Company, Inc., Raleigh
Mitchell Distributing Company, Inc., Spruce Pine
Twin-States Equipment Company, Charlotte
Twin-States Equipment Company, Raleigh

NORTH DAKOTA
Smith, [illegible]orporated, Fargo

OHIO
The Carnegie Body Company, Cleveland
The Buckeye Supply Co., Wooster
The Buckeye Supply Co., Zanesville
*Kencar Equipment Company, Dayton
Middlekauff, Inc., Toledo
Ohio Truck & Parts Company, Cincinnati
Universal Sales Company, Portsmouth
*Weaver Trailer & Body Co., Columbus

OKLAHOMA
*American Body and Trailer, Inc., Oklahoma City
*American Body and Trailer, Inc., Tulsa
Duncan Equipment Company, Duncan
*Leland Equipment Company, Oklahoma City
*Leland Equipment Company, Tulsa
Seminole Motor Sales, Seminole

OREGON
Western Equipment Company, Eugene
Western Equipment Company, Portland
Western Equipment Company, Roseburg

PENNSYLVANIA
Doerr Brothers, Inc., Pittsburgh
Eastern Body Company, Philadelphia
Trailco Mfg. & Sales Company, Selinsgrove

SOUTH DAKOTA
Pecaut Equipment Company, Sioux Falls

TENNESSEE
Furlow-Cate, Inc., Chattanooga
Martin Machinery & Supply Company, Knoxville
Rogers Manufacturing Co., Inc., Nashville
*Scruggs Equipment Company, Memphis

TEXAS
*Adams Truck Company, Inc., San Antonio
American Trailer Service, Inc., Amarillo
*City Welding Shop, Borger
Downs & Clark Equipment Co., Odessa
*Downs-Clark, Inc., Lubbock
*Alex Feigelson Company, Beaumont
*Hobbs Trailer Sales Company, El Paso
*Leland Equipment Company, Longview
*Oilfield Truck Equipment Co., Dallas
Oilfield Truck Equipment Co., Ft. Worth
*Oilfield Truck Equipment Co., Houston
*Truckers Equipment, Inc., Corpus Christi
Truckers Equipment, Inc., Harlingen
*Wichita Engineering Company, Wichita Falls

UTAH
*The Lang Company, Inc., Salt Lake City

VIRGINIA
*Cole-Kelly Equipment Corp., Richmond
*Cole-Kelly Equipment Corp., Roanoke
Transit Trailer Company, Portsmouth

WASHINGTON
*Andrews Equipment Service of Washington, Inc., Spokane
*Utility Trailer & Equipment Company, Seattle

WEST VIRGINIA
*West Virginia Tractor & Equipment Co., Charleston
West Virginia Tractor & Equipment Co., Clarksburg

WISCONSIN
Mullins Body, Inc., South Milwaukee

WYOMING
*Gehring Equipment Company, Casper

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*Coutts Machinery Co., Ltd., Calgary, Alberta
*Coutts Machinery Company, Ltd., Edmonton, Alberta
*Truck Parts & Equipment Limited, Vancouver, B. C.
Western Tractor & Equipment Co., Ltd., Regina, Sask.
Western Tractor & Equipment Co., Ltd., Saskatoon, Sask.
Willock Truck Equipment Co., Ltd., Vancouver, B. C.
*Phil Wood Industries Limited, Windsor, Ontario

CUBA
Cia Agro-Mecanica Industrial Campalva S. A., Havana

HAWAII
A. F. Stubenberg Limited, Honolulu 13

MEXICO
*Auto Servicio, S. A., Mexico I, D. F.

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Motor Specialties Limited, Auckland, C. I

VENEZUELA
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TULSA, OKLAHOMA DIVISION OF VICKERS Inc.

DL-154

★ Reg. U. S. Pat. Office

THE WORLD'S LARGEST MANUFACTURER OF TRUCK POWER WINCHES

INTRODUCING . . .

. . . **Ray J. Fellows** and **J. W. Perschbacher,** promoted to sales manager and assistant sales manager respectively, Wisconsin Motor Corp., Milwaukee, Wis.

. . . **Harold J. Meagher,** elected president, Highway Trailer Co., Edgerton, Wis.

. . . **R. S. Plexico,** promoted to assistant chief engineer, in charge of truck chassis design section, Chevrolet Motor Division, General Motors Corp., Detroit.

. . . **T. M. Hughes,** promoted to manager of dealer operations, Seiberling Rubber Co., Akron, Ohio.

. . . **R. E. Dunstan,** appointed regional sales manager, Dorsey Trailer Co., Elba, Ala.

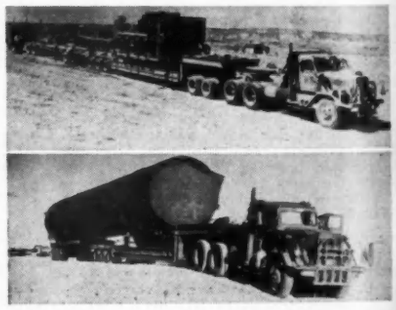
. . . **A. D. McCombs,** Albany, N. Y., factory branch manager, Trailmobile, Inc., Cincinnati, Ohio.

. . . **Richard C. Carson,** promoted to vice president in charge of engineering, Shuler Axle Co., Louisville, Ky.

. . . **Venlo J. Wolfsohn,** promoted to northeastern states public relations field representative, American Trucking Assns., Washington, D. C.

(TURN TO PAGE 298, PLEASE)

Big Rig for Big Load



The "Big Rig" — unloaded weight 79,000 lb—used by El Paso Natural Gas Co. on recent construction operations in northwestern New Mexico is shown here in its adaptations for hauling two types of giant equipment. Top photo shows tandem jeep dolly under front of triple axle lowboy, so placed to help distribute concentrated weight of compressor engine. They weigh 90,000 to 130,000 lb. Bottom photo shows mammoth treating vessel—length 100 ft, weight 185,000 lb—being moved on the lowboy and a triple axle float trailer boomed to the rear of the vessel. Note that dolly's support is not needed here. All three units were designed and built by Hobbs Mfg. Co., Fort Worth, Texas. The trailer, tandem jeep dolly and triple-axle float trailer were devised to haul both the long, bulky treating vessel and the heavier, more compact compressor engine with a minimum of equipment.

special undercover work

—*protects the performance of your GMC Trucks!*

THAT'S a very special foil being used to cover the bearing in the photo at left. Its metallic surface acts to bar both air and moisture. It protects GMC parts from attack by rust while they're warehoused.

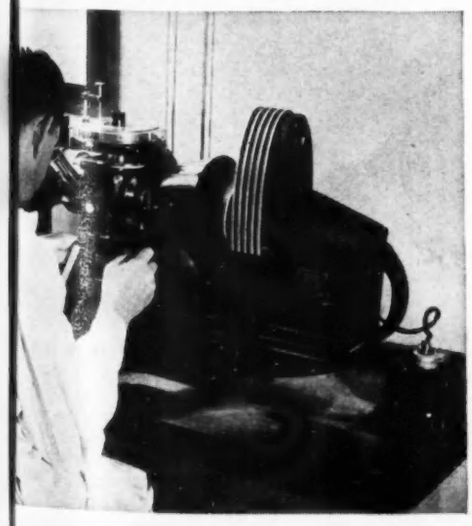
And that's only one example of GMC packaging techniques. Dozens of materials—including the newest plastics—are used in special wrappings and packing for every part that needs special protection.

So you can be sure any GMC replacement you order will be in perfect condition—ready for immediate installation. It's been solidly protected from shipping and handling damage. Corrosion-prevention's built right into its package whenever necessary.

And the quality of the parts, themselves? Remember, they're made in the same factory—on the same machines—to the same high standards—as the original parts in today's great GMC Trucks.

So all the risks of using cut-rate substitutes are avoided when you make a GMC Dealer your exclusive source. And you'll always find the part you need for any GMC model — packaged to protect every GMC's performance!

GMC Truck & Coach Division of General Motors



Precision — tested in special machines like this one that magnifies specimens to 2,000 times normal size

Be careful—drive safely

—best part of any service job!

Introducing . . .

Continued from Page 294

. . . **Herbert H. Clarke, Jr.,** promoted to vice president and general sales manager, Chemical Division, Borden Co., New York City.

. . . **Francis J. Kinsella,** promoted to manager of outside sales, Standard Pressed Steel Co., Jenkintown, Pa.

. . . **Theodore McGill,** promoted to director of safety, department of Sanitation, City of New York, New York City.

. . . **James H. Brooks,** promoted to Boston, Mass., regional manager—trucks, Dodge Division, Chrysler Corp., Detroit.

. . . **Robert J. Test,** appointed assistant secretary, Interstate Commerce Commission, Washington, D. C.

. . . **Robert J. Carosello** and **Fred W. Volz,** appointed district managers with headquarters in Norfolk, Cal., and Dallas, Texas, respectively, Perfect Circle Corp., Hagerstown, Ind.

. . . **Warren M. Stuart,** promoted to sales development manager, **Robert N. Alvis,** promoted to West Central district manager, and **Edwin D. Stull, Jr.,** transferred to Philadelphia, Belden Mfg. Co., Chicago, Ill.

. . . **R. W. Richardson,** appointed vice president, The Kelly-Springfield Tire Co., Cumberland, Md.

. . . **Charles Lackey,** promoted to eastern field representative, United Van Lines, Inc., St. Louis, Mo.

. . . **Paul Clarke,** promoted to executive vice president and legal counsel, North American Van Lines, Inc., Fort Wayne, Ind.

. . . **Garvin A. Drew,** promoted vice president in charge of sales, service, advertising, and sales promotion, A. Schrader's Son Division, Scovill Mfg. Co., Brooklyn, N. Y.

. . . **Jack Fleck,** elected vice president, Denver Chicago Trucking Co., Denver, Colo.

. . . **Glenn Wible,** promoted to director of operations and safety, Ward Trucking Corp., Altoona, Pa.

. . . **Ralph N. Murray,** promoted to eastern North Carolina district operations manager, Pilot Freight Carriers, Inc., Winston-Salem, N. C.

(TURN TO PAGE 301, PLEASE)

ATA Honors Sinclair

American Trucking Assns. has awarded Sinclair Refining Co. a citation for service "in disseminating widely, information about the fundamental importance of motor truck transportation" . . . and for "leadership in arousing public interest in a concern for adequacy of the nation's highways." Above, James E. Dyer (right) President of Sinclair, displays the citation and accepts the congratulations of Jack Cole, President of the ATA.

Introducing . . .

Continued from Page 298

. . . **Leroy Field, Jr.,** promoted to executive vice president, **A. J. Devery,** promoted to vice president—operations, and **F. J. Hoette,** promoted to vice president—maintenance, Chicago Express, Inc., New York City.

. . . **Carlos Hogue,** Albuquerque Warehouse Co., elected president, New Mexico Motor Carriers Assn., Albuquerque, N. M.

. . . **Joseph H. Freedman,** elected president, New York and New Brunswick Auto Express Co., Highland Park, N. J.

. . . **Albert A. Hally,** appointed general sales manager, Campbell Chain Co., York, Pa.

. . . **Hershel V. Hiatt,** named director of engineering, Milwaukee Division, Le Roi Co. He was formerly assistant chief engineer, Allison Division, General Motors Corp.

. . . **D. B. Lawrence,** promoted to assistant sales manager, Heating and Ventilating Division, Evans Products Co., Plymouth, Mich.

. . . **Henry O. Kirkpatrick,** promoted to manager, Coldmobile Division, Union Asbestos and Rubber Co., Blue Island, Ill.

. . . **Roland Karste,** promoted to sales manager, Detroit District Office, The Heil Co., Milwaukee, Wis.

. . . **E. E. Krogstad,** transferred to motor truck district sales manager, Tulsa, Okla., International Harvester Co., Chicago.

. . . **Lewis F. Manneschmidt,** promoted to eastern sales division manager, and **James J. Mooney,** promoted to Philadelphia branch manager, Trailmobile, Inc., Cincinnati, Ohio.

. . . **J. Benton Wilkins,** promoted to assistant advertising manager, Carter Carburetor Corp., St. Louis, Mo.

. . . **N. L. Young,** promoted to wholesale manager, state of Florida, The White Motor Co., Cleveland, Ohio.

. . . **Philip A. Larnino,** appointed manager of manufacturing, The Four Wheel Drive Auto Co., Clintonville, Wis. He was formerly general manager, Unicel and Jahn Trailer Division, Pressed Steel Car Co.

. . . **Allan Hoover** and **Richard I. Galland,** elected to the board of directors, Thompson Trailer Corp., Pikesville, Md.

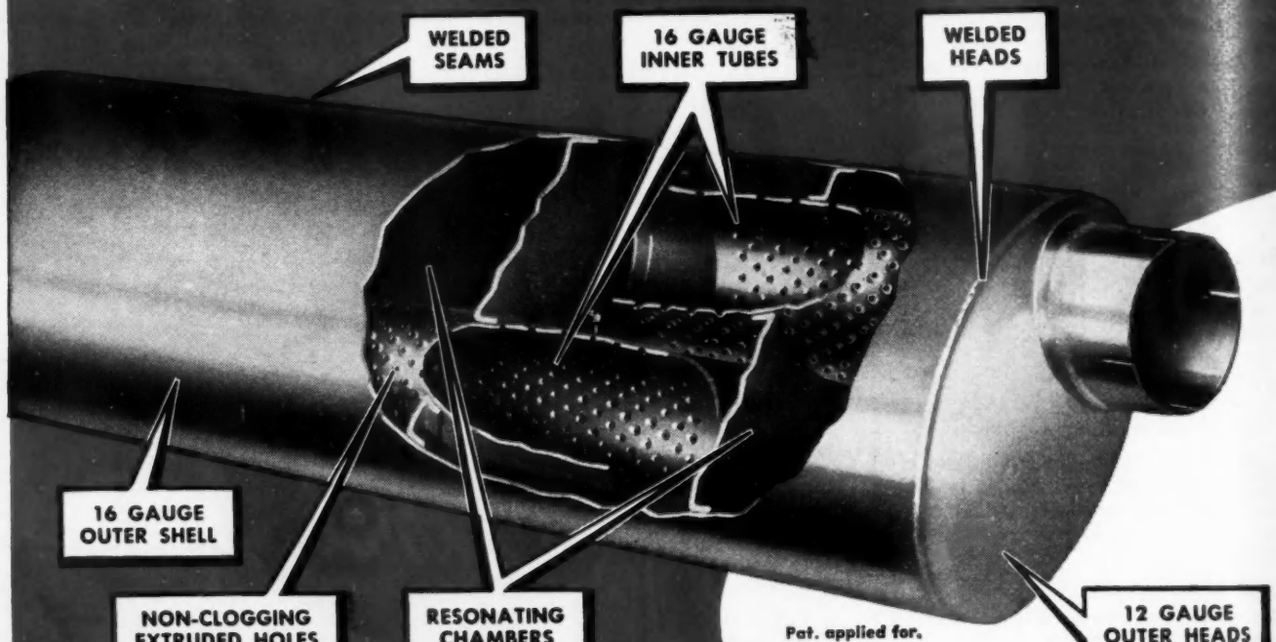
. . . **U. R. Gress,** promoted to assistant manager truck trailer axle sales, Timken-Detroit Division, Rockwell Spring and Axle Co., Kenton, Ohio.

. . . **Alf E. Werolin,** promoted to vice president and general manager, National Motor Bearing Co., Redwood City, Cal.

. . . **C. C. Hobek,** appointed midwestern states factory sales representative; **C. E. Kinney,** promoted to Toledo, Ohio, plant sales representative; **D. W. Rice,** promoted to midwestern states factory sales representative for "Cargo Van" truck bodies; **N. E. Pfund,** appointed Ohio, Mich., and Ind. factory sales representative, and **J. E. Collier,** appointed southeast factory sales representative, Brown Trailers, Inc., Toledo, Ohio.

. . . **Burt A. MacLeod,** left, and **W. D. Houpt,** right, promoted to field sales managers, Executive Dept., Willard Storage Battery Co., Cleveland, Ohio.

Maximum Power? Yes
Long Life? Yes
Then It's the New AP Heavy Duty



Pat. applied for.

LESS BACK PRESSURE
The AP Heavy Duty Truck Muffler is scientifically designed to deliver maximum power.

SILENCE
Silence the complaints of civic groups by installing new, quiet AP Truck Mufflers.

SAFETY
AP heavy construction and precision fit lowers danger of carbon monoxide.

SILENT POWER with AP

The release
Mufflers by
accordance
Program nov
can Trucking

When we ask
improvements
they said:

1. Less ba
3. Greater

And that's
AP Heavy Du
time you can
wanted.

You get *les*
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So call your
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THE AP
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Manufacturers of:

Fleet Training Courses

FLEET training courses have shown themselves an excellent source of trained personnel and a good way to keep up-to-date on latest techniques in fleet safety, maintenance and operation. For your convenience, here is a calendar of courses scheduled for 1954 together with the address to write to for further information. Unless otherwise noted, courses are full time day courses.

APRIL

5- 9—Fleet Supervisors Training Course—Dept. of Engineering, University of Maryland, College Park, Md.
5- 9—Fleet Supervisors Training Course—Dept. of Civil Engineering, University of Washington, Seattle 5, Wash.
19-23—Fleet Supervisors Training Course—General Extension Division, University of Florida, Gainesville, Fla.
19-23—Vehicle Maintenance Course—Continuing Education Dept., Michigan State College, East Lansing, Mich.
26-30—Course for Trainers of Commercial Drivers—Continuing Education Dept., Michigan State College, East Lansing, Mich.
26-30—Fleet Supervisors Training Course—Transportation and Traffic Management Institute, Northeastern University, Boston 15, Mass.
26-30—Fleet Supervisors Training Course—College of Business Administration, University of Tennessee, Knoxville, Tenn.
26-May 7—Adminsitration and Technique of Accident Investigation—Vocational and Industrial Education Dept., University of Alabama, Tuscaloosa, Ala.
26-May 14—Administration and Technique of Accident Investigation—Traffic Institute, Northwestern University, Evanston, Ill.
26-May 22—Truck Driver Training School, College Extension Division, North Carolina State College, Raleigh, N. C.

MAY

3- 7—Vehicle Maintenance Course—Institute of Public Safety, Pennsylvania State University, State College, Pa.
3- 7—Fleet Driver Supervisors Training Course—Engineering Extension Offices, University of Wisconsin, Madison 6, Wis.
8 —Fleet Supervisor Top Management Conference—Center for Continuation Study, University of Minnesota, Minneapolis 14, Minn.
12-14—Terminal Operation Loss Prevention Course—Dept. of Motor Transportation, University of Georgia, Atlanta, Ga.
18-20—Motor Fleet Management Institute—Industrial Education Dept., Extension Division, University of Texas, Austin 12, Texas.
24-28—Course for Trainers of Commercial Drivers—Institute of Public Safety, Pennsylvania State University, State College, Pa.
24-June 19—Truck Driver Training School, College Extension Division, North Carolina State College, Raleigh, N. C.

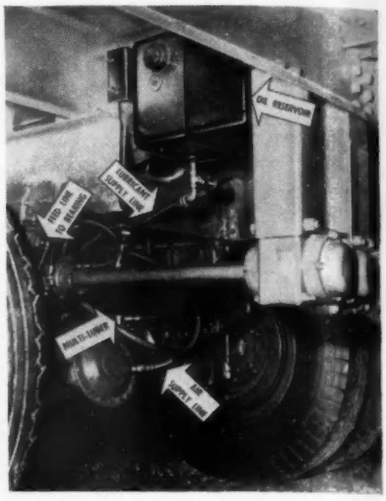
JUNE

7-11—Fleet Supervisor Course—Program Coordinator, University of Denver, Denver, Col.
14-18—Course for Trainers of Commercial Drivers—Engineering Extension Services, Iowa State College, Ames, Iowa.

Lincoln Announces Automatic, Centralized Trailer Lubricator

LINCOLN Engineering Co., St. Louis, Mo., has announced a trailer lubricator designed to provide automatic, centralized and controlled lubrication on air brake-equipped trailers. The system includes all chassis bearings on gravity tandem, spring suspended tandem and most single-axle air-braked units.

The system consists of a lubricant

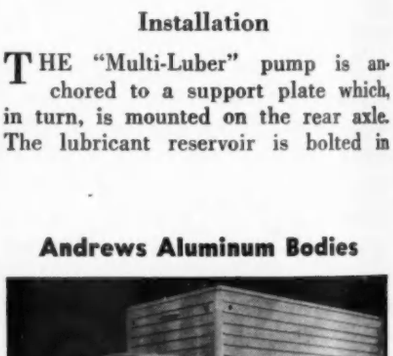


reservoir with a 4-gal capacity and the "Multi-Luber" air operated pumping unit supplying an equal quantity of lubricant simultaneously to each individual bearing. This is done—through rigid or flexible feed lines attached to the "Multi-Luber" pump and to the bearings—each of the trailer air brakes are applied.

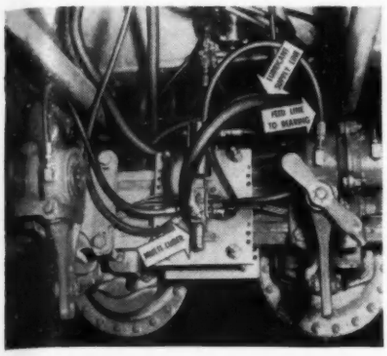
Installation

THE "Multi-Luber" pump is anchored to a support plate which, in turn, is mounted on the rear axle. The lubricant reservoir is bolted in

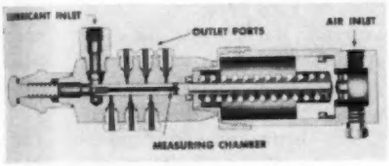
Andrews Aluminum Bodies



New prefabricated truck bodies made of aluminum in eleven standard lengths in three body styles have been announced by Andrews Industries, Inc., St. Louis, Mo. The company states two men can unpack and assemble this body, ready for mounting upon a truck bed, in two hours or less. Design features include interlocking aluminum extrusions at four corner posts and along roof edges. Simple tightening of bolts cause sections to "snap" into locking position in accurate body alignment. All three styles: standard van, van with extended rear platform, and van with side door and wheel housing come in lengths from 12 to 22 ft in one foot increments. Corner posts are made of heavy aluminum extrusions. Sides and roof are .040 corrugated clad aluminum. Three types of rear door closures and three gates are listed as available extras.



position above the pump from which EP lube oil is fed by gravity and atmospheric pressure into the measuring chamber to prime the pump. An air supply line from the brake diaphragm air line to the pumping unit provides the air pressure to operate the pump. Each time the trailer air brakes are applied, air pressure from the brake diaphragm actuates a piston in the pump. This piston forces lubricant



from the measuring chamber, under pressure and in equal volume, to each of the pump outlet ports and thence through the feed lines to each bearing served.

This combination piston plunger and control valve pumps, measures and directs the EP lubricant through each individual feed line progressively from the first to the last bearing served each time the system is cycled. At no time during the stroke is more than one outlet port connected to the pumping chamber so as to insure each bearing its proper amount of lubricant. A disconnected feed line or a bearing with greater clearance than others in the system has no effect on delivery of lubricant to other bearings in the system.

As the spring-loaded plunger returns to normal position, the measuring chamber is automatically refilled with lubricant from the reservoir.

Each "Multi-Luber" pump is designed to serve up to a maximum of 12 bearings. If more than 12 bearings are to be included, two pumping units may be employed. One or more outlet ports can be plugged where fewer than 12 bearings are to be served by a single pump.

Each open outlet port discharges .002 oz of EP lube in each cycle regardless of how many ports are plugged. Thus, if any one feed line be damaged, only .002 oz of lube would be lost each time the system was cycled.

Chevrolet 4-Wheel Drive

"The Napco Powr-Pak" 4-wheel drive for Chevrolet trucks features a 2-speed range, with fingertip control. It is an improved model of the same military-type 4-wheel drive chosen by the U. S. Armed Forces for the Chevrolet trucks used during World War II. Made by Napco Products Division, Northwestern Auto Parts Co., Minneapolis, Minn. Any Chevrolet dealer can provide new Chevrolet trucks factory equipped with the new unit, or it is possible to convert trucks presently in use. The truck remains unchanged except for the addition of the "Powr-Pak" itself. It uses standard Chevrolet truck parts.

Studebaker Offers V-8 in '54 Truck Line

STUDEBAKER'S announcement of its 1954 truck line includes offering a V-8 engine in its 1½ and 2-ton trucks. The new truck series, ranging from a half-ton pick-up to a heavy-duty 2-ton unit, includes five basic models. Gross vehicle ratings range from 4600 to 16,000 lb. The 1954 trucks are designated as the 3R series.

Studebaker's 1½ and 2-ton trucks are now available with either the high-performing V-8 or the sturdy 6-cyl 'Power Plus' engine. Along with increased horsepower is a four-speed synchromesh transmission as standard on all 2-ton models and optional at extra cost on all the others.

The heavy-duty transmission which was formerly available at extra cost on the 1½-ton models is now standard on those models.

A new wheelbase has been added to the 1-ton series. The 3R14 one-ton truck will have a 131-in. wheelbase, 9-ft body, and gross vehicle rating of 9500 lb.

Power Plants

THREE different power plants are available for Studebaker's 1954 trucks: the 6-cyl "Econ-O-Miser" and "Power Plus" engines for the lighter models, and either the new V-8 power plant or the 6-cyl "Power Plus" engine for the 1½ and 2-ton models. A compression ratio of 7.5 to 1 is standard for the "Econ-O-Miser" and V-8 engines, and 7:00 to 1 cr is standard for the "Power Plus" engine.

Half-ton and ¾-ton models are available with wheelbases of 112 and 122 in.

"Today is my partner's birthday, so he rates breakfast in bed!"

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respectively. One-ton models are offered with wheelbases of either 121 or 131 in. The 1½ and 2-ton models have wheelbases of 131, 155, 171, or 195 in.

Cab interiors are color-matched to harmonize with exterior hues. There are nine different body color options. Exterior changes include a smart new grille, headlamp, and bumper assembly. New one-piece windshields coupled with the sloping hoods enable drivers to see the road to a point within a few feet of the front bumpers.

Instruments are larger and centrally grouped for quick identification.

Three-speed synchromesh transmission is standard, with overdrive transmission optional at extra cost on the ½ and ¾-ton models. Four-speed transmission is standard on the 1-ton Heavy-duty four-speed transmission is standard on the 1½-ton models. Four-speed synchromesh transmission is standard on all 2-ton models and available at extra cost on any of the others.

An exclusive feature on Studebaker's ¾-ton truck lies in the underslung rear spring leaves which contribute to low loading height. An option—2-stage rear springs—is also offered for the ¾-ton truck.

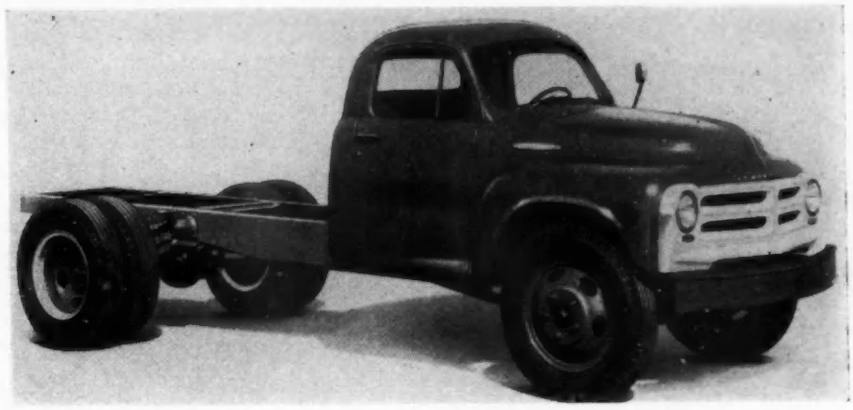
Axles

ALL 1-ton models are equipped with new self-energizing brakes and new hypoid rear axles with ratios of 5.14 or 5.83. These same capacity vehicles with 131-in wheelbase may be obtained with either 17-in. single rear wheels or 16-in. dual rear wheels. A new, lower 9-ft stake body makes loading and handling much easier.

Trucks from the 1-ton model up are equipped with easy-riding springs featuring four distinct advantages; (1) double-wrapped spring eyes on the front of each rear spring so that if breakage of the main leaf should occur, the second leaf takes over, (2) use of slide mounts whereby the rear spring glides under the spring hanger as the truck is loaded with the result that as the springs become shorter their strength increases, (3) replaceable wear plate to prevent spring hanger failure by protecting it from frictional wear, and (4) rubber-bushed spring eyes which eliminate the metal-to-metal contact between spring eyes and pins and thus eliminate the need for lubrication at these points.

Direct bumper-to-frame mountings with new "wing" braces provide added protection for the front ends of the heavier models.

A wide range of rear axle ratios makes possible the selection of the proper gear combination. A two-speed axle is available at extra cost on the 1½ and 2-ton models.

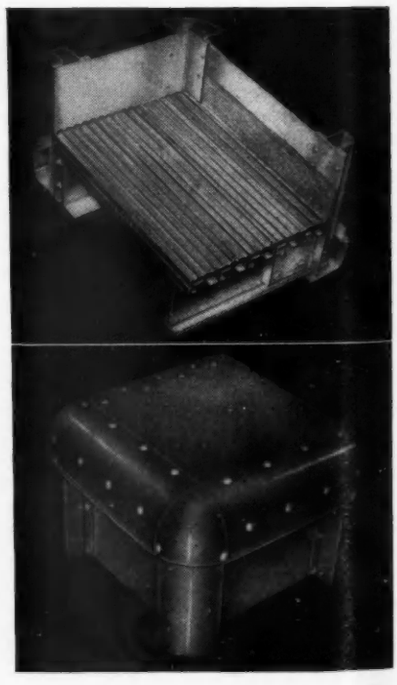


Magnesium Body Is 35% Lighter Than Aluminum

NEW truck bodies, utilizing body panels made from magnesium alloy sheet, are reported to be 35 per cent lighter than comparable aluminum bodies.

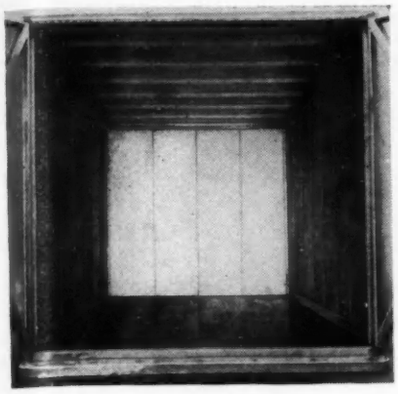
In a standard model, a 12 ft van-type body complete with roof and doors, there is a cubic capacity of 621 cu ft and a weight of only 850 lbs. For the same cubic capacity in the 12 ft body, a steel model would weigh about 2200 lbs and an aluminum body of comparable strength and construction would weigh almost 1300 lbs.

The entire body is assembled with 56-S alloy aluminum rivets because of their excellent strength characteristics



and because they create no electrolytic corrosion hazard. Similar precautions are taken at the points of contact between the magnesium longitudinal stringers and the steel chassis rails.

Aluminum strips and tie down brackets are used to prevent any direct contact between the magnesium and the steel. In addition, a special insulating plastic compound is employed at all joints to insure against water leakage and corrosion.



Two Basic Types

MADE by White Metal Rolling and and Stamping Corp., Brooklyn, N. Y., they are available in two basic types: the completely enclosed van type and the open type. Either of these types is available in body lengths from eight to 24 ft in 2 ft increments. Either of these types is available as a straight frame or wheelhousing model.

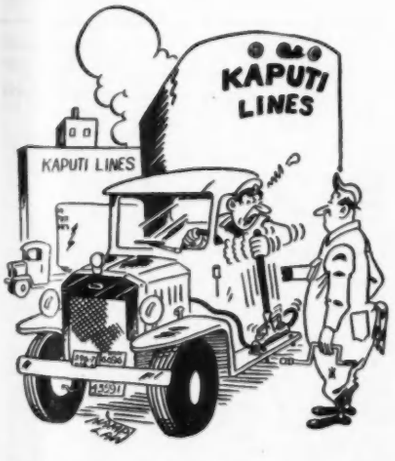
The open type of body can be had with sides of any desired height up to 7½ ft. Supports for a tarpaulin covering for this type of body can be provided. The van type body can be furnished with or without rear and/or side doors. Scissors or chain type express gate with or without curtain, is available, if desired, in place of doors. Double paneling, and insulation may be supplied at a proportionate additional charge.

They are available in "knocked-down" condition. That is, assembled floors, sides, front sections, roofs and back doors will be furnished for subsequent final assembly by the customer at destination. Component parts for making "Whitelight," magnesium truck bodies also can be obtained. This consists of a package kit containing the various extruded shapes, panel sheets, hardware, etc., all cut to required length or mitered to correct dimensions, and holes drilled for rivets and bolts, etc., but not assembled.

Van body weights for the various available lengths are as follows:

Interior Length in feet	Weight in pounds Standard	Heavy Duty
8	663	850
10	724	950
12	832	1100
14	90	1225
16	1055	1400
18	1188	1575
20	1300	1725
22	1432	1900
24	1518	2025

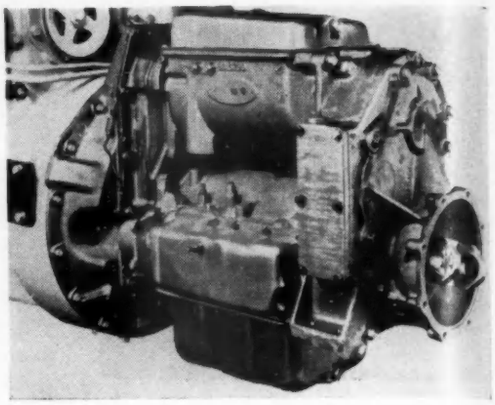
The bodies are built to mount on regular 34 or 36-in. chassis frame. They are constructed to fit trucks having SAE standard cab-to-axle dimensions as follows: 39, 48, 60, 72, 84, 96, 108, 132, 144, 156 in. Exterior width of the van body is 7 ft, 8 in., with a 7 ft, 8 in. maximum height. Interior width of the van body is 7 ft, 2½ in., with maximum interior height of 7 ft, 2 in.



"That was my last trip until you get me a new fuel pump!"

GMC Twin Hydra-Matic for Heavy-Duty Hauling

Three driving ranges plus seven forward and one reverse gears give 16 changes



ANNOUNCEMENT of an automatic drive for heavy duty trucks, combining automatic shifting with sufficient multiplicity of gear ratios to meet heavy duty hauling requirements has been made by GMC Truck and Coach Div., General Motors Corp.

First application of "Twin Hydra-Matic" drive is on the GMC diesel model DFM-660-47. a C-O-E highway tractor rated at 60,000 lb GCW. It will be made available later in other 150-hp models, eventually will be adapted for GMC gasoline and diesel models in the 175-225-hp range.

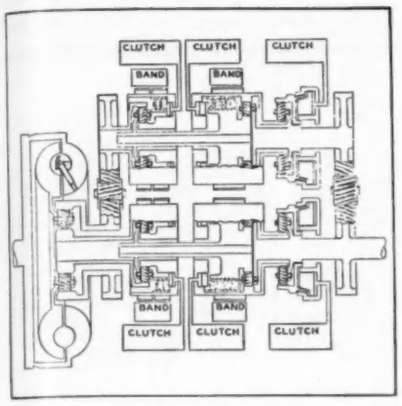
As illustrated, the Twin Hydra-Matic transmission consists of two Hydra-Matic units, mounted in a case of hour-glass form, one above the other. This combination provides seven closely spaced forward gear ratios and one

Gear Ratios

7-speed Hydra-Matic		3-speed Reduction Unit	
1st	2.90	Direct	1.00
2nd	2.34	Low	2.00
3rd	1.86	Creeper	3.87
4th	1.45		
5th	1.10		
6th	.89		
7th	.71		
Reverse	3.21		

Total Ratios and Gradeability

Gear Position		Total Reduction	% Grade at Max. Engine Torque, 60,000# GCW
Hydra-Matic	3-spd. Unit		
1st	Creeper	83.61	24.4
2nd	Creeper	67.46	19.5
3rd	Creeper	53.62	15.2
4th	Creeper	41.75	11.7
5th	Creeper	31.75	8.7
6th	Creeper	25.66	6.8
7th	Creeper	20.47	5.2
1st	Low	43.30	12.1
2nd	Low	34.94	9.6
3rd	Low	27.68	7.4
4th	Low	21.66	5.6
5th	Low	16.44	4.0
6th	Low	13.24	3.0
7th	Low	10.54	2.2
1st	Direct	21.65	5.6
2nd	Direct	17.47	4.3
3rd	Direct	13.84	3.2
4th	Direct	10.83	2.3
5th	Direct	8.22	1.5
6th	Direct	6.62	1.0
7th	Direct	5.27	.6



Upshifts

Reduction Transmission Range

Shift	Creeper		Low		Direct	
	Minimum Throttle	Full Throttle	Minimum Throttle	Full Throttle	Minimum Throttle	Full Throttle
1–2	2.4	3.3	4.6	6.3	9.2	12.6
2–3	3.0	4.1	5.8	8.0	11.5	16.0
3–4	3.5	5.2	6.8	10.0	13.5	20.1
4–5	4.4	6.7	8.5	12.9	17.0	25.8
5–6	6.2	8.8	12.0	17.0	23.9	34.0
6–7	8.0	10.8	15.5	21.0	31.0	42.0
7 to governor	....	13.6	....	26.3	....	52.7

reverse, shifting automatically in a manner somewhat similar to the usual operation of the Hydra-Matic drive.

A three-speed reduction gear box is mounted behind the automatic drive, connected by a short propeller shaft, providing three driving ranges at the option of the driver. Although theoretically this combination is capable of 21 different gear ratios, in actual operation there are certain overlapping gear ratios in each range with the result that usually the combination will provide a maximum of some 13 distinct gear changes and three reverse.

The driven member of the fluid coupling is bolted to a planetary gear set which acts as a differential and operates both upper and lower halves of the twin Hydra-Matic. Both upper and lower units are governed to shift independently and alternatively with each other. Both units are geared together at the rear, driving a single output shaft.

In addition, the fluid coupling incorporates a special centrifugal valve arrangement to decrease efficiency of fluid coupling to prevent drive with an idling engine.

From the standpoint of the driver, the main control is achieved through four positions to cover the gamut of maneuvers. These include: neutral, drive, hold, and reverse. Since the transmission shifts automatically through the 7-speed range, these positions are the basic control of the Twin Hydra-Matic.

Supplementing the Twin Hydra-Matic is the 3-speed reduction unit which has a direct ratio of one-to-one; low position of 2 to 1; and a Creeper or low-low position of 3.87 to 1. These ratios provide the driving ranges to be selected by the operator through manual shift much the same as in the case of the current GMC 8-speed Hydra-Matic drive for lighter vehicles.

Shifting Conditions, Speed

IT MAY be noted at this point that the selection of the range—through the auxiliary gear box—depends entirely upon the terrain and load conditions. For example, under extreme conditions of maximum load and grade, the driver may elect to move progressively from creeper to direct. Under

(TURN TO PAGE 312 PLEASE)

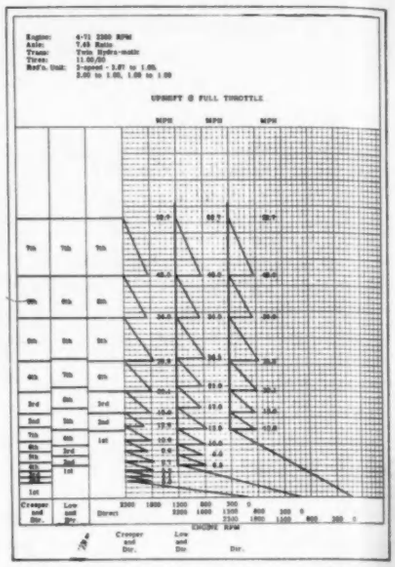
GMC Hydra-Matic

Continued from Page 311

normal conditions such as maximum load and on level terrain, a start may be made in low—or middle range—then a shift to high. Under more favorable conditions the vehicle may be started in direct range. With training and some road experience the driver will find it possible to manipulate the drive with great facility and maximum economy.

As in the case of most automatic drives the road speed at which the various shifts occur depends upon throttle position. The term "minimum throttle" is the minimum amount of throttle required to upshift or downshift the transmission. "Full throttle" is depressing the accelerator to the floor board. The Upshift chart on page 311 shows the *average road speeds* at which shifts will occur. This is based on 11.00/20 tires, rear axle ratio of 7.45 to 1, and governed engine speed of 2300 rpm.

These maneuvers can best be appreciated by studying the stepped chart reproduced here. The three columns to the left show the progression of gear ratio combinations for each of the



maneuvers mentioned above; while the three stepped diagrams to the right indicate the road speeds at which the maneuvers will take place under conditions of maximum throttle.

Directly under the stepped diagrams on the right hand side of the chart are three lines showing the engine rpm at which the shifts take place. The top line refers to creeper and direct, the second line to low and direct, and the bottom line to direct.